

## **Historic, Archive Document**

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*The Blue Bird in the legend stands for Purity·Happiness  
and Good Luck·In SEEDS·for the Best that Grows·*

# BLUE BIRD BRAND SEEDS

REGISTERED  
JAN 1 1921 ★  
U. S. Department of Agriculture



*The* C·E·DEPUY CO.  
SEEDSMEN  
PONTIAC · MICHIGAN

**1921**



	Pkt.
1—Wardwell's Kidney Wax Beans...	\$0.10
2—Early Frame Cucumber.....	.05
3—Premium Gem Peas.....	.10
4—Spanish Jumbo Pepper.....	.15
5—White Plume Celery.....	.05
6—Detroit Dark Red Beets.....	.05
7—Oxheart Carrot .....	.05
8—Southport White Globe Onion....	.05
9—Harris' Earliest Watermelon.....	.05
10—Tip Top Muskmelon.....	.05
11—Charleston Wakefield Cabbage....	.05
12—Crimson Giant Radish.....	.05

## SPECIAL INTRODUCTORY OFFERS AT HALF PRICE

### Assortment No. 1.

1—Beans	1 Pkt. \$0.10
2—Cucumber	" " .05
4—Pepper	" " .05
6—Beets	" " .05
9—Watermelon	" " .05
11—Cabbage	" " .05
12—Radish	" " .05

ALL FOR 25c POSTPAID.

### Assortment No. 2.

3—Peas	1 Pkt. \$0.10
4—Peppers	" " .15
2—Cucumber	" " .05
7—Carrots	" " .05
5—Celery	" " .05
10—Muskmelon	" " .05
12—Radish	" " .05

ALL FOR 25c POSTPAID.

### Assortment No. 3.

2—Cucumber	1 Pkt. \$0.05
4—Peppers	" " .15
6—Beets	" " .05
8—Onions	" " .05
7—Carrots	" " .05
11—Cabbage	" " .05
12—Radish	" " .05

ALL FOR 25c POSTPAID.



# How to Order

**Free Postage or Express.** We pay postage or express on packets, ounces, quarter pounds or pounds ordered at list prices. Customers ordering enough for freight shipments, or desiring to pay their own charges, may deduct eight cents per pound from **Prepaid List Prices**.

**Our Terms** are strictly cash with orders. As to our responsibility, we refer to Pontiac banks; First and Old Detroit National Bank, Detroit, and to Dun's or Bradstreet's reports.

**Remittances** should be by postoffice, or express money order, bank draft, check or registered letter. Remittances any other way will be at sender's risk. We will accept stamps if in good condition for sums less than \$1.00.

**How to Order.** Please use order sheet in catalog. Other blanks will be furnished by asking for them. Fill out blank spaces at top, write name and full address plainly. Keep a copy of your order. If wishing to write regarding any other matter than the order, please use a separate sheet.

**Seeds by Parcel Post.** By a recent ruling, seeds are carried at the same rate as other merchandise. Up to 8 ounces the rate is one cent for each two ounces for any distance. Over 8 ounces take pound rates. Within the local zones and up to 150 miles the maximum weight is 70 pounds. Greater distances, the maximum weight is 20 pounds. If seeds are to be sent by mail, remittance should include postage as per schedule below. Any post-office has a map showing zones and will furnish rates.

**Seeds by Express.** In certain instances express rates on small lots are lower than either mail or freight. These can be ascertained by inquiry at your express office, and charges can be paid there when shipment arrives.

**Seeds by Freight.** Be sure to give name of your nearest freight office. If a prepaid station, freight charges must be included in remittance, when shipment will be sent with charges paid.

**Bags Charged.** A charge of 60 cents will be made for each new cotton seamless grain bag. These are heavy 16-ounce and hold 2½ bushels.

**Our Gardeners Packets** are a departure from the usual sealed envelop, which, when once torn open, is difficult to preserve without the seed losing out. They are put up fresh when ordered, are not torn open to get the seed out, will not leak, are always ready to use from and will be found very convenient and safe. Remember, no old, carried over packets from us.

**Non-Warranty.** Most of the failures with seeds are due to causes entirely beyond our control, such as unfavorable weather or soil conditions, too deep or too shallow planting, etc., which renders it impossible for us to guarantee success, and although we take all possible care to supply only such goods as will, under proper conditions, produce satisfactory results, we still give no warranty as to description, quality or productiveness of any of the seeds we send out, and will not be in any way responsible for the crop. If the purchaser does not accept the goods under these conditions, they are to be at once returned.

However, to show our confidence in the seeds we furnish, we will allow ten days in which to make germination tests, and if not found entirely satisfactory, the goods may be returned to us, when your purchase money and all transportation charges will be promptly refunded. We could not afford to make this offer if we were not sure of our quality.

## SPECIAL NOTICE

For years we have made a specialty of **ALFALFA SEED**, both Grimm's and the common varieties, Michigan grown **WHITE BLOSSOM SWEET CLOVER**, **WINTER VETCH**, **RED CLOVERS** and **ALSIKE**. Our connections for obtaining the best seeds are the results of years of patient search, therefore do not believe anyone can step in from other employment and at once, secure such seed as we offer under the **BLUE BIRD BRAND**, which in every case, represents the very cream of the crop.

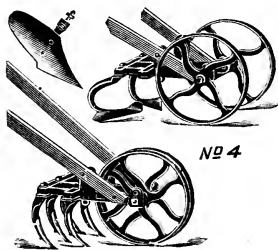
**SHIPPING CONDITIONS** have improved greatly, yet we advise placing orders early to insure against any possible delay.

**THE C. E. DEPUY COMPANY**

Local	1lb.	1	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35	36-37	38-39	40-41	42-43	44-45	46-47	48-49	50			
Postage	5c	6c	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
Zone 1 and 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
100 Miles	Postage	5c	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Weight		1lb.	2lbs.	3lbs.	4lbs.	5lbs.	6lbs.	7lbs.	8lbs.	9lbs.	10lbs.	11lbs.	12lbs.	13lbs.	14lbs.	15lbs.	16lbs.	17lbs.	18lbs.	19lbs.	20lbs.									
Zone 3 300 Miles		6c	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44									
Zone 4 600 Miles		7c	11	15	19	23	27	31	35	39	43	47	51	55	59	63	67	71	75	79	83									
Zone 5 1000 Miles		8c	14	20	26	32	38	44	50	56	62	68	74	80	86	92	98	1.04	1.10	1.16	1.22									
Zone 6 1400 Miles		9c	17	25	33	41	49	57	65	73	81	89	97	1.05	1.13	1.21	1.29	1.37	1.45	1.53	1.61									
Zone 7 1800 Miles		11c	21	31	41	51	61	71	81	91	1.01	1.11	1.21	1.31	1.41	1.51	1.61	1.71	1.81	1.91	2.01									
Zone 8 Over 1800 Miles		12c	24	36	48	60	72	84	96	1.08	1.20	1.32	1.44	1.56	1.68	1.80	1.92	2.04	2.16	2.28	2.40									

# Bacon Hand Seed Drills, Hoes and Plows

Made of Angle Iron, Malleable and Steel, Insuring Great Strength and Durability.

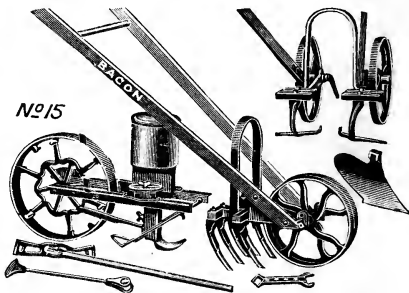


The seed distributor is the most essential feature of a garden drill. In the "Bacon" we offer one that handles all kinds of garden seeds with a degree of perfection that is unequalled, it being especially desirable for carrots, beets, parsnips, onions, wrinkled peas, etc., planting a very even row with light seeding. The feed will also handle phosphates, which can be applied before or after seeding. The Hill Dropper deposits seeds in a compact hill 2 inches long and 9, 12, 18, or 36 inches apart.

The V shaped shoe furrow opener deposits the seed in a narrow line, allowing close cultivation and saving hand weeding.

The Chilled Cultivator Tooth takes a high polish and has great wearing qualities. It permits very close cultivation and leaves the ground level without the need of a rake.

The hoe is an improved pattern. It leaves the ground level without exposing the roots to sun or air.



No. 1 Drill same as No. 10 without the hill dropper. Price, \$10.50.

No. 4, Combined Single and Double Wheel Cultivator, Hoe and Plow. For early cultivation it may be used with two wheels, working both sides of the row at once, and later with one wheel, working between the rows. Price, \$8.25.

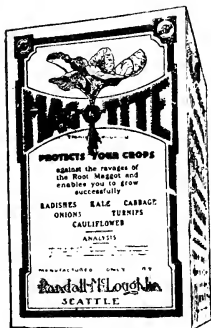
No. 6. Expansion Arch Cultivator, Hoe, and Plow. Used as a single or double wheel implement. The high arch gives as much clearance as a 30 inch wheel cultivator, runs easier and does closer work. Price, \$9.25.

No. 10. Hill and Drill Seeder ..... \$11.50

No. 12. Hill and Drill Seeder, and No. 4 cultivator combined ..... 15.50

No. 15. Hill and Drill Seeder, and No. 6 cultivator combined ..... 16.25

## INSECTICIDES



**MAG-O-TITE.** Protect your Onion, Radish and other root crops by using Mag-O-Tite. It destroys root maggots, and other earth worms which so frequently destroy these crops. Is applied when seeds are planted, same as fertilizer. No spraying. It eliminates earth worms, destroys Strawberry Crown Borers, Cabbage Worms, Asparagus Miners, Cut Worms, Flea Beetles and all kinds of Slugs. It has a fertilizing value and improves the quality and yield of cabbage, cauliflower, turnips, radishes, onions, beans, etc. Prices: 2 lb. package, 40c; 4 lbs., 60c; 8 lbs., \$1.00; 25 lbs., \$2.50, by express or freight.

**S. & W. DRY LIME-SULPHUR.** This is the only genuine

dry lime-sulphur. It is made by a patented process and is different from any other so-called lime-sulphur on the market. The color is a bright lemon, is thoroughly and quickly soluble in water, contains no grit or insoluble sediment to clog spray nozzles. You will use no other after a trial of the S. & W. brand. Prices: 5 lbs., \$1.00; 10 lbs., \$1.85; 25 lbs., \$4.25; 50 lbs., \$8.00 100 lbs., \$15.00, by freight or express.

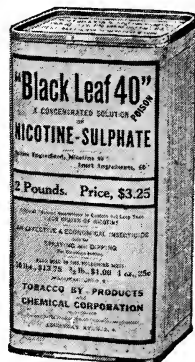
**ARSENATE OF LEAD POWDER.** (30 per cent arsenous oxide) used to destroy all leaf eating insects. We handle the Triangle Brand, made by one of the largest and oldest manufacturers in the country. Prices: 1 lb., 46c; 5 lbs., \$2.15; 10 lbs., \$4.00; 25 lbs., \$9.25; 50 lbs., \$17.50; 100 lbs., \$33.00.

**"BLACK LEAF 40"** is the strongest tobacco extract made. Contains 40 per cent pure nicotine and is the most valuable of all sprays for Aphids, Thrip, red spiders, rose bugs, green fly and all kinds of plant lice. Full descriptive matter on request. Prices: 1 oz. bottle, 25c; 1/2 lb. cans, \$1.00; 2 lb. cans, \$3.25; 10 lb. cans, \$13.75, by freight or express.

**HAMMOND'S SLUG SHOT** is an old and reliable remedy for cabbage worms, currant worms and lice, gooseberry worms and mildew, lice on fowls, etc. Prices: Lb., 25c; 5 lbs., 50c; 10 lbs., 90c.

**"GERMOSIDE."** A reliable liquid preparation for treating oats and other grain to prevent smut. Bottles sufficient for 5 bushels, 25c each. By express or freight. Cannot be mailed.

**WHALE OIL SOAP.** Made from pure whale oil and caustic potash. Remember this is not Fish Oil, but genuine Whale Oil Soap. For insects on plants, shrubbery, trees, animals, poultry, etc. Prices: 1 lb. Cake, 30c, postpaid. Not postpaid, 20c.



POISONS CANNOT BE SENT BY MAIL.

IF WISHING LARGE AMOUNTS OF SPRAYING MATERIAL, PLEASE LET US HAVE YOUR SPECIFICATIONS AND WILL QUOTE VERY LOWEST PRICES.

## THE BLUE BIRD STANDARD OF QUALITY



During the fifteen years we have put out seeds under the Blue Bird Brand, we cannot recall ever having a single complaint, but have received scores of complimentary letters expressing the satisfaction of pleased customers. Aside from the knowledge that this means permanent customers, such expressions reward us for the painstaking efforts we have made to make the Blue Bird Brand a guarantee of the best possible values.

We anticipate an unusual demand this season, especially for the higher grades of Clovers, Alfalfa and Grasses, which we sell at lower prices than in several years; and we shall continue to maintain the high standard of the Blue Bird Brand, which has made these seeds so popular. Old customers will order them with utmost confidence and we can recommend them with the same confidence to all others, knowing they will not be disappointed.



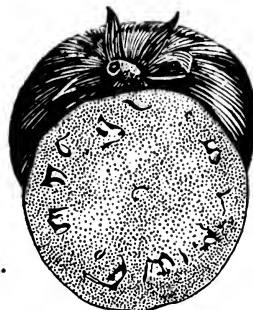


## THE BURBANK TOMATO

Luther Burbank's  
Marvelous New Creation

By far the earliest and best  
Tomato ever grown.

Packet of 100 Seeds, 15 cents.



Here we have the VERY BEST EARLY and VERY EARLIEST GOOD TOMATO yet known. Like most other good things, this comes as a matter of evolution. Mr. Burbank states that he has spent more than a dozen years in "evolving" this new "creation" through careful selective plant breeding, striving to see how many desirable, and how few undesirable features he could succeed in combining in one fruit.

### The Burbank Tomato

Excels All Other Early Varieties on the Following Counts:

1. **PRECOCITY**—Not only a few specimens, but the entire crop ripens up far in advance of all others. This season it yielded from 60 to 80 ripe fruits, average 15 pounds per plant, at one picking.
2. **SOLIDITY**—Has no open cavities, and seeds are few and small. Slices solid as a beef steak.
3. **PRODUCTIVENESS**—The entire plot yielded an average of one-fourth bushel per plant.
4. **QUALITY**—Flavor unsurpassed for eating raw. In size averages two to three inches in diameter. Ripens up perfectly without crack, spot, or blemish. Color bright red, same as "Stone."
5. **BLIGHT PROOF**—Mr. A. B. Haven, the well known Tomato Seed Grower, writes: "Mr. Burbank's claim for this variety that it is more resistant to blight, and other tomato diseases, than any other varieties, is confirmed by our experience this season, inasmuch as several other varieties growing near it have shown much more disease, in the way of blight, and dying earlier, than has the Burbank."

The following is Mr. Burbank's personal introductory claims:

### The Earliest Tomato in the World—The "Burbank"

"By far the earliest, smoothest, solidest, most productive, and best of all early tomatoes; resists wilt and other tomato diseases better than most others. The 'Burbank' is so much earlier than other tomatoes that from the seed of the tomatoes which ripened here in June, a second crop has been again and again grown and ripened the same season, something probably never before known. This extreme earliness means millions of dollars to America tomato growers, as one-half the tomatoes grown in the United States, even in California, are taken by frost instead of by the grower.

"Fruit, bright crimson; thick, solid, heavy, smooth, firm, medium to large in size, superior quality, unusually heavy and continuous bearer throughout the season; best keeper and shipper. The 'Burbank' has one other unique and most remarkable quality which will be appreciated by those who like fresh sliced tomatoes for the table. Unlike other tomatoes, the skin peels freely from the rich, firm flesh."

**Price:** The "Burbank" Tomato can be offered only in packets of 100 seeds each this season. Per pkt., 15c; 2 pkts., 25c; 10 pkts., \$1.00.

## THE C. E. DePUY CO.

### SEEDSMEN

Pontiac, .. Mich.

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# Burbank's New Extra Early Tomato



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The C. E. DePuy Co.  
SEEDSMEN

THE EARLIEST GOOD TOMATO IN THE WORLD Pontiac - - Mich.  
Read the description on the other side



## Asparagus

Asparagus seed should be sown early in spring, on rich, light soil, in drills a foot or more apart, covering the seed an inch deep. Thin to three or four inches and keep the ground mellow and clear of weeds the first season by frequent hoeing. The next spring, transplant to a permanent bed, which should be in deep, mellow soil, made very rich by a liberal application of manure. One ounce will sow 40 feet of drill.

**BONVALLET'S GIANT.** This Giant variety not only combines high productive power and lasting quality, but it withstands the rust, so frequently disastrous to asparagus beds. **Pkt., 5c.**

**CONOVER'S COLOSSAL.** A standard variety. Popular, productive, and of good quality. **Pkt., 5c.**

**COLUMBIAN MAMMOTH WHITE.** Produces shoots which stay white as long as fit for use without earthing up or any other artificial blanching. Nearly all seedlings will produce clear white shoots. **Pkt., 5c.**



Conover's Colossal.

SEE PRICES PAGE 21.

## Wax Podded Dwarf Beans

Order Early and Avoid Disappointment.

**HODSON WAX.** Later than Golden Wax and most of the other yellow pod varieties, hence useful to insure a succession. Vines erect, compact, bearing pods well up from the ground. Pods a creamy-white yellow, 6 to 7 inches long, straight or slightly curved, flat but fleshy and of good quality. This bean is growing in favor. **Large pkt., 10c.**

**CURRIE'S RUST PROOF BLACK WAX.** An excellent wax bean in every respect. Rust proof, tender, thick, flat pods of very good quality. Very little string in early stages, developing a little when nearing maturity. Fit for table use 47 days from planting. **Large pkt., 10c.**

**DAVIS WHITE WAX.** This bean is adapted alike for the canner, market gardener, shipper, or amateur. The dry bean is large, kidney-shaped and white in color, making it one of the best for cooking in a dry state. Pods are long, meaty, flat in shape, and of a beautiful yellow color and fair quality. **Large pkt., 10c.**

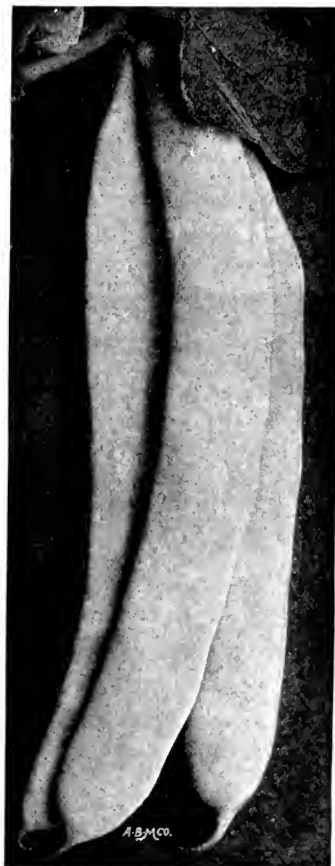
**GOLDEN WAX IMPROVED.** Rust proof, a great improvement over the old Golden Wax. Pods four to five inches long, broad, flat, golden yellow, very fleshy, and one of the best beans to use either as a snap or shelled. Ready for picking 45 to 47 days from planting. **Large pkt., 10c.**

**GRENELL GOLDEN WAX.** Vines rather more upright and harder than Golden Wax. Pods about five inches long, broad and flatter than Golden Wax. Seed similar to Improved Golden Wax. Very popular with market gardeners. **Pkt., 10c.**

**KEENEY'S RUSTLESS WAX.** One of the most vigorous growers. Vines strong and prolific. Pods produced in abundance, about five inches long, stringless, light yellow, wax-like, attractive. **Pkt., 10c.**

**PROLIFIC DWARF BLACK WAX.** —The old standard Black Wax Bean. It is so good that it is worthy of special notice. The pods are round, brittle, of handsome golden yellow color and of buttery flavor. **Pkt., 10c.**

**WARDWELL'S KIDNEY WAX.** One of the most desirable of the wax beans. Matures a little later than the Golden Wax; produces a large yield of long, nearly straight, broad, light golden yellow, very handsome pods. **Large pkt., 10c.**



Golden Wax.

FIELD BEANS  
PAGE 33.

## Green Podded Dwarf Beans

Order Early and Avoid Disappointment.

**BURPEE'S STRINGLESS GREEN POD.** This new bean produces a vine similar to Red Valentine, but develops pods to an edible condition in 42 days, about four days earlier than Valentine. The pods are green, not quite so round as Valentine and less curved. The pods are stringless, absolutely so, this quality at once placing the variety at the top of the list among table beans, while the early maturity is of great merit. This stringless quality is of particular value, the pods breaking as short and free as pipe stems. **Large pkt., 10c.**

**BLACK VALENTINE.** This excellent variety is a great improvement over the old standard Early Red Valentine, being one-third longer than that variety, with pods perfectly round and straight and of excellent quality. It also has the additional advantage of being suitable for both early and late planting, and is extremely hardy. It will withstand early and late frost; is an excellent shipper, a large yielder and of handsome appearance. **Large pkt., 10c.**

**GIANT STRINGLESS.** A very hardy, stocky vine, pods long, round, and green in color, of exceptionally fine quality and stringless throughout its entire growth. About a week earlier than Red Valentine and much more prolific. **Large pkt., 10c.**

**EXTRA EARLY REFUGEE.** Very much earlier than the old style Refugee, or 1,000 to 1, being fit to eat in 48 days from planting. More dwarf and compact in growth, while the pods are round, solid, tender. **Large pkt., 10c.**



Stringless Green Pod.

der, and of excellent quality, suitable for table use, canning, or pickling. **Large pkt., 10c.**  
**REFUGEE, or 1,000 to 1.** The vines large spreading, exceedingly hardy, with small, smooth leaves, very late, and bear long, cylindrical green pods of excellent quality. Highly esteemed for late planting and for use as pickles. **Large pkt., 10c.**

## Pole Beans

**KENTUCKY WONDER.** Vines vigorous, climbing well, and very productive, bearing its pods in large clusters; blossoms white; pods green, very long, often reaching 9 to 10 inches. Nearly round when young, and are very crisp, although as they reach maturity they become irregular and spongy. Dry beans long, oval, dun-colored. **Large pkt., 10c.**

**DUTCH CASE KNIFE.** Vines moderately vigorous, climbing well, and excellent for a corn hill bean; leaves large, crumpled, the pods very long, flat, green in color, becoming creamy white later. Beans broad, kidney-shaped, flat, and white in color. **Large pkt., 10c.**

**LAZY WIFE.** One of the most productive and easily gathered of the Pole Beans, hence its very discourteous name. A most excellent bean for the home garden. The pods of medium dark green color are produced in great abundance and measure from five to six inches long. They are broad and thick; very fleshy and entirely stringless. The pods retain their rich, tender and stringless qualities until nearly ripe, and at all stages are peculiarly luscious. **Pkt., 10c.**

**LARGE WHITE LIMA.** The large Lima is a general favorite wherever it can be cultivated, on account of its excellent flavor and productiveness. **Large pkt., 10c.**

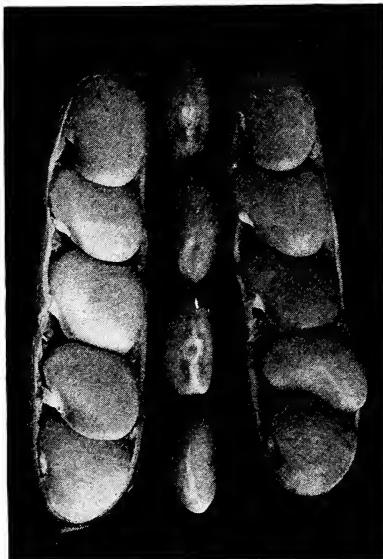
## Dwarf Limas

**BURPEE'S.** The only bush form of the true, luscious, large Lima. It is pronounced by all good judges as unquestionably the real Bush Lima. The bushes grow eighteen to twenty inches high, of stout growth and always erect. It has an immense yielder. **Large pkt., 10c.**

**HENDERSON'S.** This is a bush form of the small Sieva pole bean. It is the original bush form of the pole beans. It is the most productive of any, and on the whole is a vegetable of great merit. **Large pkt., 10c.**

### ONCE A CUSTOMER, ALWAYS A CUSTOMER.

It is our aim to furnish the best seeds that can be obtained. We make a conscientious effort to have them fresh, and in case of field seeds, to see they are well cleaned. We expect every trial order will make a permanent customer.



Henderson's Bush Lima.



Kentucky Wonder.



## Beets

### Order Early and Avoid Disappointment.

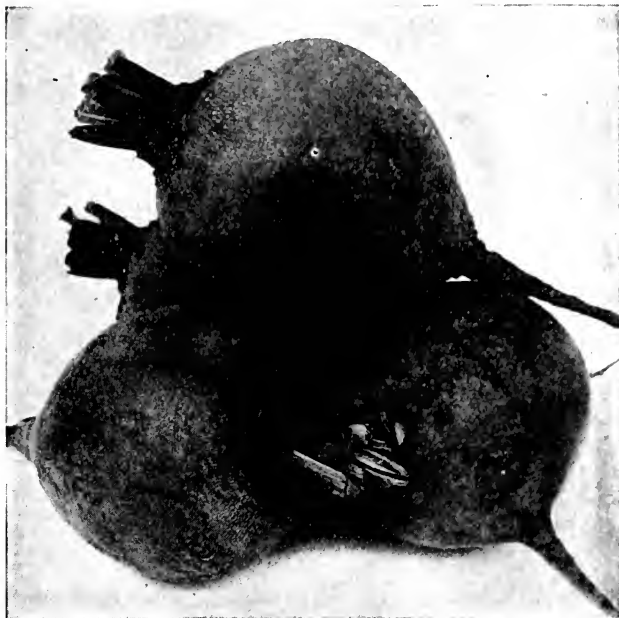
The best results are obtained on a deep, rich, sandy loam. If wanted very early, sow such sorts as Crosby's Egyptian and Detroit Dark Red in hotbeds and transplant, cutting off the outer leaves. For general crop, sow in freshly prepared soil as soon as the ground will permit, in rows eighteen inches apart, covering about an inch deep, and pressing the soil firmly over the seed. One ounce of seed will sow 50 feet of row; 5 to 6 lbs. for an acre.

**EXTRA EARLY ECLIPSE.** This is not only an extra early beet, but if sown late, it is valuable for winter use. Its rapid growth, extreme earliness, neat globe shape, with small top, and bright crimson color, make this a most popular sort with growers. Pkt., 5c.

**EARLY TURNIP BASSANO.** Tops large; leaf stems light red; leaves light green; roots large, flesh pink, zoned with white. Pkt., 5c.

**EDMAND'S EARLY BLOOD TURNIP.** The best sort for general crop. In quality one of the finest, exceedingly dark, shape globular, having only one tap-root. Very popular with market men. Pkt., 5c.

**IMPROVED LONG DARK BLOOD.** Tops large, necks small, leaf stems and veins red, leaf green, roots large, tapering, growing even with the surface. Flesh dark red, zoned with lighter shade, tender and sweet and remaining so when kept till spring. Pkt., 5c.



Detroit Dark Red.

**DETROIT DARK RED.** A medium early globe-shaped beet of excellent quality. It is especially esteemed on account of its dark-red color, which extends entirely through the beet, and without the light colored rings seen in some varieties. The beets are smooth and handsome. Pkt., 5c.

**CROSBY'S EGYPTIAN.** Much in demand by market gardeners for forcing and early outdoor sowing. This beet is perfect in shape, and deepest red color. Equally as good for bunching as for the fall market. Its fine color and superior quality make this one of the best beets. Pkt., 5c.



Crosby's Egyptian.

## Swiss Chard or Spinach Beet

**SILVER LYONS SWISS CHARD.** This is the finest white-ribbed variety in cultivation. Leaves grow twelve to fourteen inches long. Stems and mid-ribs white, brittle and tender. These are cooked the same as asparagus or pickled. A most valuable plant in any garden. Pkt., 5c.

## Mangel Wurzel AND SUGAR BEETS

**MANGELS FOR STOCK.** No more profitable crop can be grown than Mangels for cattle and swine. Every farmer should have one or two acres of root crops every year. These might consist of Mangels, carrots, Turnips and Rutabagas, but at least part should be Mangels. Quite broad, with only a small tap-root. Grows largely above the soil and is easily harvested. Yields an enormous bulk on good land, and can be grown closely in rows. Pkt., 5c.

**GIANT HALF SUGAR.** This unites the large size of the mangel with the greater feeding value of the sugar beet. The roots average ten to twelve inches, and the outline is that of a broad, thick wedge. The upper portion is of a soft, bright pink, shading lighter towards the bottom, where the lower portion for about one-third the length is white. Pkt., 5c.

**VILMORIN'S IMPROVED SUGAR.** In general, the most desirable beet for the factory is the one containing the largest percentage of sugar. Pkt., 5c.



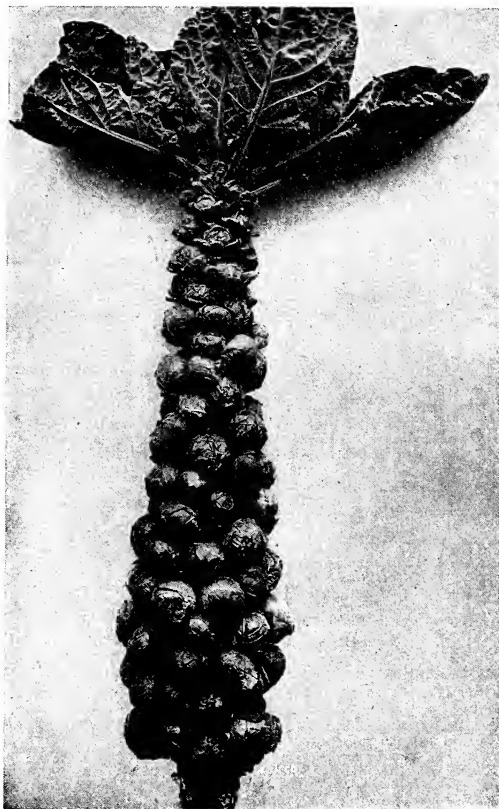
Mangel Wurzel.

gels. No other acre on the farm would return better dividends. Under proper cultivation and conditions, a yield of 40 tons per acre is not unusual, and this is equivalent in feeding value to 130 bushels of corn. These feeds help to keep the stock in a healthy condition, besides affording them a variety of feed. One ounce for 50 feet of drill; 5 lbs. for an acre.

**MAMMOTH LONG RED.** On good soil sometimes grows eighteen inches long. Dark leaves; skin bright dark red; flesh white, with veined rings of rose pink. An excellent keeper; nutritious and milk-producing. It grows to an enormous size, out of the ground. Enormously productive and profitable, if grown on rich, deep soil. An excellent keeper. Has no superior and will yield more tons per acre than any other variety. Pkt., 5c.

**GOLDEN TANKARD.** A yellow-fleshed variety highly prized by dairymen for milk-producing qualities. Slip and other stock feed on this variety and thrive. The roots are of large diameter, tapering quickly at the bottom, which is

SEE PRICES PAGE 21.



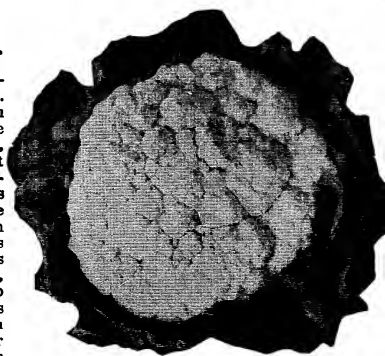
Brussels Sprouts.

## Broccoli

One ounce will produce about 2,000 plants. Start your early crop in hotbed or in the house middle of February, covering the seed about one-half inch. Transplant to cold frame as soon as the plants are large enough. Set them three to four inches apart. Remove glass part of each day, weather permitting, to harden the young plants and set permanently in open as soon as danger of frost is past. For general crop sow in open ground early in June in hills three feet apart.

Insects are quite troublesome to plants grown in open ground. Therefore, after sowing the seed, sprinkle a small quantity of tobacco dust over the seed and keep young plants free from insects.

**EARLY WHITE FRENCH.** The best and most satisfactory variety. Plants very hardy, vigorous and easily grown. Heads white, compact, hard and of good quality. Pkt., 10c.



Broccoli.

## Brussels Sprouts

One ounce of seed will grow from 1,500 to 2,000 plants. The culture is same as for Broccoli. Brussels Sprouts (see picture) is a delicious vegetable, producing miniature heads from each side of the center stalk. These heads are a great delicacy boiled in the same way as cauliflower. Sow the seed middle of May in seed bed, transplant and cultivate same as cabbage. Crop is hardy and improved by frosts. One plant will yield from one to two quarts of heads.

**IMPROVED BRUSSELS SPROUTS.** Dwarf. Of very early and dwarf habit, covered closely with miniature cabbages. Delicate and toothsome. Pkt., 10c.

## Cauliflower

For earliest Cauliflower, plant seed in greenhouse or boxes in the house during January or February. Transplant to flats or cold frames 2 to 3 inches apart. Set in open ground as soon in spring as land can be prepared. Soil should be well supplied with humus and moisture. For late Cauliflower to mature during pickling season, start plants in open ground like late cabbage and handle same as that crop. Tie the leaves over the heads to protect them from the sun. The seed we offer is our own direct importation from the most celebrated grower in Denmark. It is the best the world affords and we call particular attention to our very reasonable prices. One ounce of seed produces 1,500 plants.

**EXTRA EARLY DWARF SNOWBALL.** The earliest of all cauliflower, our strain representing the highest results yet attained in the culture of this most valuable plant. Especially adapted for forcing or wintering over for early crop. In size, compactness, and color it represents quality of the highest type. Heads frequently reach 9 to 10 inches in diameter, with depth in proportion. The plant is compact, with few short leaves and well suited for close planting. Pkt., 15c.

**EXTRA EARLY DWARF ERFURT.** A thoroughbred strain of a remarkably sure heading early variety. Is of dwarf habit, with short outside leaves, but not as early as the Early Snowball. Heads of medium to large size, curd white, very deep and of finest quality. This is one of the most valuable for both home and market garden. Regardless of price, there is positively no better seed grown than we are offering. Pkt., 15c.

**DRY WEATHER or DANISH GIANT.** The grower had but a limited amount of what he termed "extra select" seed that he offered at an extra price, and our stock is from this lot. This new variety has been fully tested in America and found especially desirable and particularly so in dry situations and seasons. Is a very sure header and a great drought resister. Head large, solid, pure white and second early. Like all other Cauliflower it requires manure and culture, but will succeed with less rainfall than any other sort. A part of all acreage should be planted to this variety. Pkt., 15c.

**AUTUMN GIANT.** A valuable late variety with long stems, succeeding best in Southern localities. Heads are very large, white, firm, and compact. Plant should be started and transplanted early to insure full development. Pkt., 10c.

ORDER SEEDS EARLY AND AVOID DISAPPOINTMENT.



Cauliflower.



SEE PRICES PAGE 21

## Cabbage

### THE IMPORTANCE OF GOOD CABBAGE SEED.

Cabbage growers realize that of all the seeds used, cabbage is the last one they can afford to take chances on, and there is probably no other seed in the list with such a variety of quality on the market as of cabbage.

The best Danish types are grown in Denmark, and every pound we handle is from the best grower in that country.

All that Cabbage requires is the soil to be rich, deep, well-drained, and abundantly manured. For the early kinds, plant 30 inches between the rows and 16 inches between the plants. For the late kinds, three feet between the rows and two feet between the plants. For very early use, sow in January or February, in hotbeds. Set out when the plants are strong enough in other hotbeds, or set in cold frames in March. Transplant when danger of frost is past to the open ground. An ounce of seed produces 1,500 plants; one-half pound to transplant an acre.

**How to Destroy Cabbage Worms.** Slug Shot can be used lightly or heavily and the cabbage suffers no harm. The cabbage forms its heads by the interior growth; it throws off its earlier and outer leaves, and no dust can enfold within its head. Apply Slug Shot with a duster, sieving it over the plants or full grown cabbages. The powder is very fine and goes a long way in field or garden. Not prepaid, 5-lb. pkg., 35c; 10 lbs., 65c. Tin Duster, each, 35c.

### Extra Early Varieties

**EXTRA EARLY EXPRESS.** The earliest cabbage known. Heads small, solid, less pointed than the Jersey Wakefield. May be planted close together. Our seed stock is an extra choice strain. Pkt., 5c.

**TRUE JERSEY WAKEFIELD.** A standard variety for early market or home use. This popular cabbage has almost superseded the Early York and Ox Heart, so popular years ago. Heads very solid, stalk short, foliage dark green. Pkt., 5c.

**EARLY LARGE WAKEFIELD.** An improved strain of the Early Jersey Wakefield and possessing many of the characteristics though larger and several days later. An excellent sort. Pkt., 5c.

**CHARLESTON WAKEFIELD.** This is a sport of the Jersey Wakefield. Heads much larger and less pointed than the original. Owing to the great popularity of this cabbage among truckers of the South, especially around Charleston, S. C., it was named Charleston Wakefield. Pkt., 5c.

**COPENHAGEN MARKET.** The earliest large round-headed cabbage yet produced. Exceptionally large for so early a variety, short stem, few outer leaves. A most excellent sort for home or market garden. Copenhagen Market is a vigorous grower and excellent keeper. Stands longer in the field without bursting than any other early variety. Uniform in size and shape. Pkt., 5c.

### Medium Early Varieties

**ALL SEASONS.** One of the largest and most desirable of the second early sorts. Plant vigorous, sure-heading. Head large, somewhat flattened, nearly round, solid and best quality. Good for early summer and autumn use and regarded as one of the most desirable for kraut. Pkt., 5c.

**EARLY DANISH ROUND HEAD.** This new cabbage is very heavy and solid, like the "Ballhead" type of cabbage; makes a fine, large, globe-shaped head with well-developed outside leaves, but is very much earlier in maturing than any of the Danish cabbages; in fact, as early as Early Jersey Wakefield, and will give a much heavier yield per acre than that variety. It is short-stemmed, the heads being produced almost on the ground. The leaves are tightly folded around each other, which permits close setting of the plants. The heads all mature at the same time. Pkt., 5c.



Copenhagen Market.

### MEDIUM EARLY VARIETIES—Continued.

**ALLHEAD.** Without doubt the finest of the second early cabbages. A good keeper and one of the surest croppers. Heads large, flat but deep, uniform in size. Desirable for kraut. By late planting can be used as a winter cabbage. Pkt., 5c.

**EARLY WINNINGSTADT.** A very popular variety; heads pointed, solid, fine grain, tender and good size. Can be planted early or late and make a good winter cabbage. Pkt., 5c.

### Late Varieties

**PREMIUM LATE FLAT DUTCH.** The best known and most popular of all the late flat Dutch strains. Heads large, thick and solid. Short stalk, foliage dark green with reddish tinge. The best of keepers. Has no useless outer leaves and grows low with short stem. It cuts white and crisp, the flavor is excellent, with no stringiness. Pkt., 5c.

**DANISH BALL HEAD CABBAGE.** For a winter cabbage for early spring sales some of our local gardeners consider this variety excellent. It has been selected and perfected for more than fifty years by Danish gardeners, who prize it highly and grow it almost exclusively for winter cabbage, and annually export large quantities. It is a hard heading, long keeping cabbage. Heads round as a ball, solid, fine grained, has few outer leaves, tender, crisp, and of excellent flavor. Pkt., 5c.

**BURPEE'S SUREHEAD CABBAGE.** This famous cabbage was first introduced 43 years ago (1877). It produces a large, round, flat head of the Flat Dutch type, and is remarkable for its certainty to head. The heads are remarkably uniform, extremely hard, fine in texture, and ordinarily weigh from 10 to 15 lbs. each. Pkt., 5c.

**BRILL'S WONDERFUL RED.** An improved strain of Red Drumhead. Heads large, round and thick. Very dark red throughout. Considered the finest strain yet introduced. Pkt., 5c.

### Chinese or Celery Cabbage

Culture same as for winter cabbage. Set plants one and one-half inches deep and one foot apart in the rows. When well grown, plants should be blanched by tying closely with burlap. Not hardy to frost, but do best in cool weather.

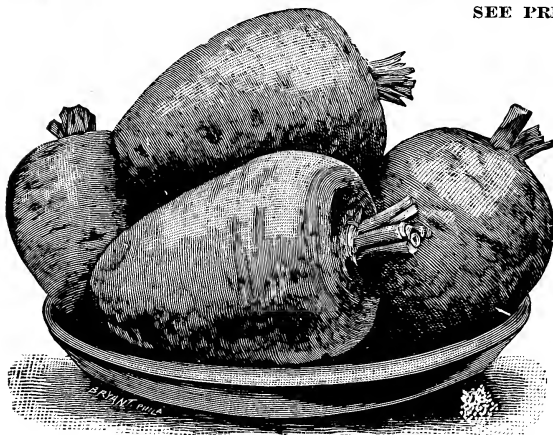
Celery Cabbage has been cultivated for centuries in China, and was introduced by the Chinese to our Pacific Coast, where it at once became a favorite garden plant with Americans. It possesses a flavor different from any other vegetable, being a combination of celery and cabbage, with the characteristics of Cos Lettuce, the blanched heads becoming crisp and tender. Cooked with meat it makes one of the most delicious greens, or may be served as cold slaw or salad. Without blanching it makes a most valuable green chicken feed. Pkt., 10c; oz., 30c; 1/4 lb., \$1.00.



Danish Ball Head.



SEE PRICES PAGE 21



**Oxheart Carrots.**

**DANVERS HALF LONG.** Grown largely on account of its great productiveness and adaptability to all classes of soil. Tops of medium size, coarsely divided. The smooth handsome roots are deep orange, of medium length, tapering uniformly to a blunt point; flesh sweet, crisp, tender, and of a deep orange color. Although the roots of this variety are short, they produce as large a bulk as the longer field sorts and are more easily harvested. **Pkt., 5c.**

## Stock Carrots

**WHITE BELGIAN.** There are other stock carrots, but none approaching this variety for yield, keeping qualities and feeding value. It attains a length of 12 inches, growing about one-fourth to one-third above the ground, making it easy to gather. It is a great favorite with stock feeders. **Pkt., 5c.**

*"On account of bad drought our tomatoes are all late, but we now have some fine large Crimson Beauty which for size and smoothness are ahead of all others, and we have six varieties."—P. R. KIMMEL, Canfield, Ohio.*



**Golden Self-Blanching Celery.**

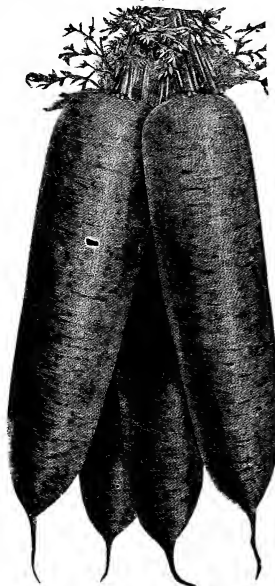
## Carrots

This is a vegetable deserving to be more generally cultivated, both for use upon the table and for stock feeding purposes. There is no more healthful crop root. For early, sow in spring as soon as the ground can be worked, in drills 15 inches apart. For main crop, sow from the middle of May to the first of July. Hoe often and deeply between the rows. Light, sandy loam, richly manured, is the best soil. It is necessary to sow carrots quite thickly on account of the young plants not having sufficient strength to come through the ground when sown thinly. Cover one-fourth to one-half inch deep and see to it that the soil is well firmed about the seed. Do not let the weeds get a start. Thin to 5 or 6 inches apart in the row. Gather and store for winter use like beets or turnips. One ounce will sow about 125 feet of drill.

**LONG ORANGE.** The most popular of the older sorts for farm use on mellow soil. An improvement obtained by years of careful selection of best formed and deepest colored roots. **Pkt., 5c.**

**GUERANDE, or OXHEART.** Tops small for the size of the roots, which are comparatively short but often reach a diameter of five inches, terminating abruptly in a small tap root. Flesh bright orange, fine grained and sweet. Very desirable for soil so hard and stiff that longer rooted sorts would not thrive in it. When young excellent for table use, and when matured equally good for stock. **Pkt., 5c.**

**CHATENAY.** Tops medium sized; necks small; roots tapering slightly but uniformly stump-rooted and smooth; color deep orange-red; flesh very crisp and tender. Although this is a medium early sort, it furnishes roots of usable size as early as any, is a heavy cropper and is undoubtedly one of the best for both market and private garden, while its great productiveness makes it very desirable as a field sort. **Pkt., 5c.**



**Long Orange Carrots.**

## Celery

One ounce will produce about 2,500 plants and sow about 200 feet of row. Sow the last of March or early in April, in an open border, in rich, mellow ground, in shallow drills, watering freely in dry weather. By rolling or pressing in the seed, the result will be more satisfactory than when only covered. Cut the tops off once or twice before planting out, to make them stocky. When the plants are 5 or 6 inches high, transplant the dwarf varieties 3 feet and the taller 4 feet between the rows; plant 6 inches apart in the rows. Cultivate well, and when large enough, blanch by earthing up. The first operation is that of "handling," generally done by the beginning of September. After the soil has been drawn up with the hoe, it is drawn around each plant by the hand to keep the leaves firm in upright position and prevent spreading. When the plants have become "set" in an upright position and the celery is wanted for early use, they should be "banked." This is done by throwing up the soil as close to the plants as possible with a plow and finishing it with a spade, bringing the earth up nearly to the tops of the plants. The method employed now for protecting it is by covering the tops of the banks with water-proof felt paper.

**FRENCH-GROWN GOLDEN SELF-BLANCHING.** Many seedsmen handle only American-grown celery seed, though it is well known that the best seed grown is that from France, where specialists have brought it to the very highest state of perfection. This seed, however, costs several times as much as the best American seed. Our stock is from the most celebrated growers and is the best that can be obtained. **Pkt., 10c.**

**AMERICAN-GROWN SELF-BLANCHING.** Our American seed is of the highest quality, grown under the supervision of one of the best specialists in the country. **Pkt., 5c.**

**WHITE PLUME.** The peculiarity of this leading variety is that the inner leaves and heart are naturally white, so that by closing the stalks, either by tying or by drawing the soil close about the plants and pressing it together with the hands, the blanching is completed. It is the earliest celery in cultivation, but will not keep longer than the holiday season. **Pkt., 5c.**

**SOUP or CUTTING CELERY.** This variety is adapted for sowing thick in rows and cutting when three or four inches high, to use for soup, flavoring. **Pkt., 5c.**

**GIANT GOLDEN HEART.** Produced by careful selection and high culture from Dwarf Golden Heart by one of the best celery growers in the country. Unequaled in quality, appearance and large size. Highly recommended for both market and home growing. **Pkt., 5c.**



SEE PRICES PAGE 21.

## Corn, Sweet or Sugar

On account of the general low viability of seed from the 1917 crop, sweet corn did not make a normal crop the past season, with the result that the supply matured from seed from the 1918 crop is limited in all parts of the country. In fact, one of the most important growing sections has practically no surplus stock to offer. The quality of seed is much better than that used the past season, but supplies are very limited. Gardeners and others intending to plant any considerable acreage should secure their seed early.

Our stock is strictly Northern grown and from a district that is famous for the quality produced.

### GOLDEN BANTAM.

Although very early it possesses the valuable quality of being one of the sweetest and richest. It may be planted thickly as late as July 15. By successive planting it may be had for table use from July 20 on. The grains are of a rich, golden-yellow, of fine flavor. **Pkt., 10c.**

### MAMMOTH WHITE CORY.

Considering its exceptional earliness, this corn is extra large. The stalks grow about four feet high, each bearing 2 ears of good quality. **Large pkt., 10c.**

### EARLY MINNESOTA.

An old favorite. While not as early as the Mammoth White Cory, it is of excellent quality, ears 8 to 10 rowed, and very productive. The latter is the most desirable feature. **Large pkt., 10c.**

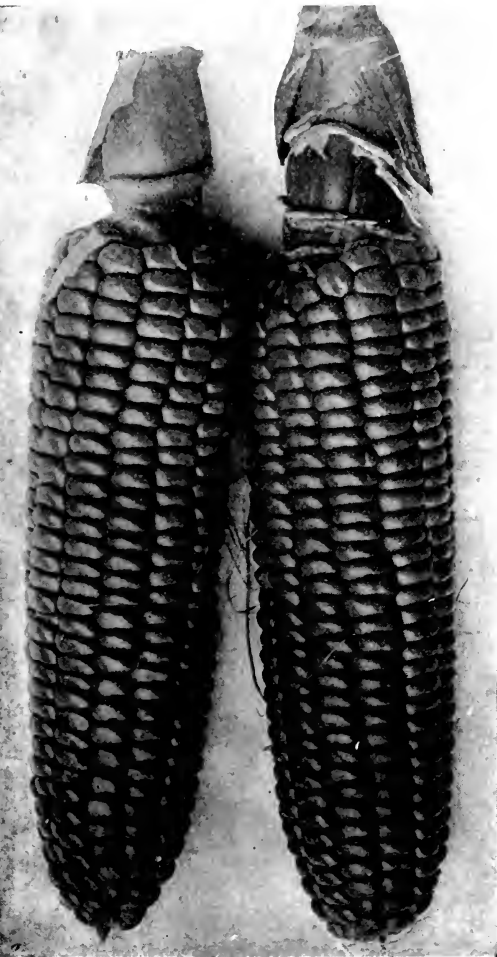
**BLACK MEXICAN.** This corn, when in condition for the table, cooks remarkably white; but the ripe grain is black or bluish-black. It is surpassed by none in tenderness. For family use it is considered by many the most desirable of the medium late sorts. It does especially well for second early. **Large pkt., 10c.**

**EARLY EVERGREEN.** The ears of this new corn grow 8 inches long, with mostly 14 to 18 rows. This is a magnificent kind for market gardeners and for main crop in every home garden. It ripens 10 to 12 days in advance of Stowell's Evergreen and is equally as good for all purposes. The kernels are very sweet and tender, and when eaten from the cob break off free from husky tips so common in some otherwise fine table corns. **Large pkt., 10c.**

**STOWELL'S EVERGREEN.** A favorite with canners and market gardeners for late use and especially for the kitchen garden. Ears large, kernels very deep, tender and of the most delicious sweetness; very productive. **Large pkt., 10c.**

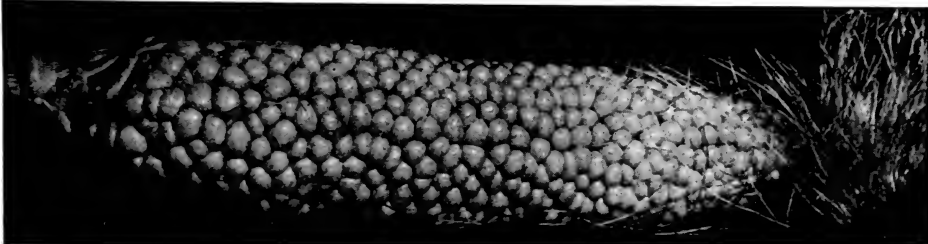


Stowell's Evergreen.



Golden Bantam.

**COUNTRY GENTLEMAN.** We have a stock of this excellent sweet corn that is exceptionally good. There is no sweet corn that compares with the Country Gentleman for sweetness. It is the variety par excellence where quality is desired. Market gardeners who make a specialty of growing for hotels and high class restaurant trade use this as a main crop variety in preference to any other. For home use it will be found superior and it is very productive. The fact that it is a favorite variety with canners prove its merits. **Large pkt., 10c.**



Country Gentleman.

WRITE FOR SPECIAL PRICES ON QUANTITY LOTS OF SWEET CORN.

SEE PRICES PAGE 21.

## Select Cucumbers

Our Cucumber seed is grown in a district famous for this crop, and seed saved from only the more perfect specimens. No greater care can be taken to produce select seed than has been exercised in saving the stock we offer. Cucumbers succeed best in warm, moist, rich, loamy ground. They should not be planted in the open air until there is a prospect of settled warm weather. Plant in hills about 4 feet each way. The hills should be previously prepared by mixing thoroughly with the soil in each a shovelful of well-rotted manure. Sprinkle vines liberally with **Slug Shot** to protect from bugs, and when all danger from insects is past, thin out the plants, leaving three or four of the strongest to each hill. One ounce of seed will plant about 50 hills; two pounds will plant an acre.

**DAVIS PERFECT.** A splendid cucumber for the home garden and for the truck farmer. Possesses all the merits of the best slicing varieties, wonderfully uniform in shape and exceedingly productive. **Pkt., 5c.**

**BOSTON PICKLING.** This is a very productive variety that is extensively grown for pickles. The vines are vigorous. The fruits are bright green, of medium size, very smooth and symmetrical. The flesh crisp and tender. **Pkt., 5c.**

**CHICAGO, or WESTERFIELD PICKLING.** A variety esteemed and grown extensively for the large pickling establishments. **Pkt., 5c.**

**EARLY CLUSTER.** Vine vigorous, producing the bulk of the crop near the root in clusters. Fruit short with uniformly thick end, dark green, but paler at blossom end. **Pkt., 5c.**

**KLONDYKE.** A medium early, white spined cucumber of handsome, very dark green color and of excellent quality for slicing. The vines are very hardy and productive. The fruits when mature are about eight inches long and are uniform in size and shape. Color dark green. **Pkt., 5c.**

**JERSEY PICKLE.** Sixty days to make pickles. It is productive, and said to "green" better than any other variety, and to "hold color." **Pkt., 5c.**

**IMPROVED LONG GREEN.** This is an old, well known variety, attaining a length of about 12 inches. A favorite for sweet pickles; also desirable for slicing. **Pkt., 5c.**

**EVERGREEN WHITE SPINE.** An improved strain of the well known White Spine, and a favorite with market gardeners both for forcing and outdoor culture. **Pkt., 5c.**

**ARLINGTON WHITE SPINE.** This variety is used for forcing in frames and hothouses. Long fruits of dark green color. **Pkt., 5c.**

**EARLY FRAME, or SHORT GREEN.** An excellent sort for table use and for pickling. Fruit straight, handsome, smaller at each end, bright green; flesh tender and crisp and makes fine pickles. **Pkt., 5c.**

**LEMON.** By all odds the best cucumber for slicing yet produced. Size and color of a large lemon. Flesh thick, crisp and delicious flavor. Very prolific and produces throughout the season. We unhesitatingly recommend it in every garden. **Pkt., 5c.**



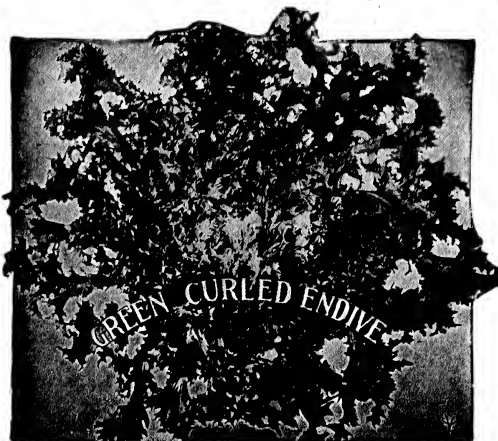
Evergreen White Spine Cucumber.

## Endive

Endive is usually grown for late fall and winter use, but is all right for any season of the year. It is very popular with the foreign trade and is sometimes called Winter Lettuce, or "Winter Salad." Plant seed in August or September in drills about as you would lettuce, thin out plants to ten or twelve inches apart. It is blanched for use by gathering over the center of the plants.

**BROAD LEAVED.** This is remarkable for its beauty more than quality. The best market variety, as the plant is so attractive that it brings the highest price. **Pkt., 5c.**

**GREEN CURLED.** One of the hardiest; beautiful curled dark green leaves; blanches white and crisp; best quality. **Pkt., 5c.**



## Egg Plant

Sow in hotbed early in spring; transplant 2½ feet apart each way after weather becomes settled and warm. If no hotbed is at hand, plants may be started in pots or boxes. The potato beetle is very fond of the plants. Paris Green, also Slug Shot, applied as to potatoes, will keep them in check. 1 oz. for 1,000 plants.

**NEW YORK IMPROVED PURPLE.** This variety is a general favorite both for market and private use. Plants large, spreading foliage light green; fruit very large, oval, color a splendid dark purple. **Pkt., 10c.**

**BLACK BEAUTY.** About the earliest of all Egg Plants. Fruit nearly as large as the Improved Purple, good size, skin dark purple, and holds its color a long time. Flesh white, fine grained and delicious. **Pkt., 10c.**



## Dandelion

One of the earliest spring vegetables, much esteemed for a delicate salad. Sow seed in spring when soil is warm, in rows a foot apart, one-fourth inch deep. The quality is much improved by blanching which is easily done by covering the plants with boards. Let the plants remain over winter. Ready to cut early following spring.

**FRENCH THICK-LEAVED.** **Pkt., 10c.**

## Dill

An easily cultivated plant highly prized by our grandmothers. The plant and seeds are used in pickles and soups. The seeds possess a flavor similar to caraway and used in cakes. **Pkt., 5c.**





Early Purple Vienna Kohl-Rabi.

**AMERICAN FLAG.** This is the sort chiefly grown by market gardeners. It is of excellent quality, mild flavor and uniform. Pkt., 5c.

## Kohl Rabi

Kohl-Rabi is a vegetable intermediate between a cabbage and a turnip and combines the flavor of both. The edible part is a turnip-shaped bulb, caused by a swelling of the seed. When used for the table, should be cut when small, as it is then very delicate and tender. Sow seeds in rows 18 inches apart, thinning out when large enough.

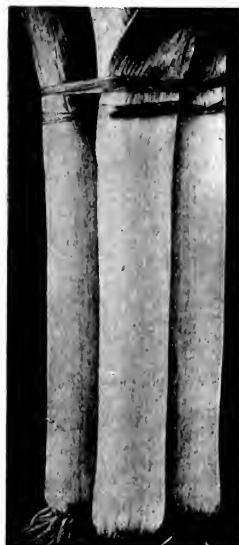
**EARLY WHITE VIENNA.** Very early, small, handsome white bulb. Best early variety for the table. Pkt., 10c.

**EARLY PURPLE VIENNA.** Nearly identical with the above, except in color, which is a bright purple, with the leaf stems tinged with purple. Pkt., 10c.

## Leek

One ounce of seed to 150 feet of drill.

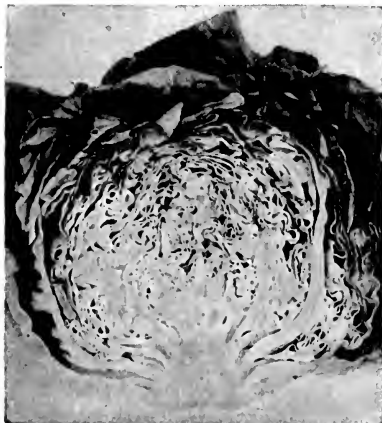
Sow the seed out-of-doors in June and thin out to four inches apart. Leek is a vegetable of unusual merit, and is not half appreciated by the American people, while it is regarded as a great favorite by many of our foreign population.



American Flag Leek.

If there is any Lettuce seed on the market produced under conditions likely to afford better crops than ours, we have not heard of it. For early spring use sow in September and protect through the winter in cold frames the same as cabbages, or sow in hot beds in March, and transplant to open ground as soon as it can be worked. For late supplies sow in open ground as soon as season will permit, in rows one foot apart; thin out plants to one foot apart in rows. If sown every two or three weeks to the middle of August, it may be had in perfection the entire season. One ounce will sow 125 feet of drill and produce 3,000 plants.

## Lettuce



Big Boston Lettuce.

## Cabbage or Heading Varieties

**BIG BOSTON.** A splendid lettuce for market gardeners, either north or south. Leaves are light green, nearly smooth except the outside edges, which are somewhat ruffled. Forms large and very compact heads that are especially suitable for shipping, for which purpose it is planted very largely in the South. Pkt., 5c.

**CALIFORNIA CREAM LETTUCE.** A variety of cabbage lettuce, with round, solid heads. Outside, the heads are a medium green slightly marked with small brown spots; within, the leaves are of a very rich, creamy-yellow color, most refreshing in appearance; particularly rich and buttery to the taste. It is medium early and the best summer variety of head lettuce. Pkt., 5c.

**HANSON.** (Seed white). One of the most desirable late summer lettuces. The plant is compact and forms a large, cabbage-like head which remains in condition longer than most heading sorts. Outer leaves bright yellowish-green, somewhat crumpled and frilled at edge. Inner leaves white; very crisp and sweet. Pkt., 5c.

**MAY KING.** Earliest of head varieties. Excellent for outdoor and for forcing. Heads compact. Inner leaves blanch to a golden-yellow. Very tender and buttery. We recommend this as one of the best for both home and market gardeners. Pkt., 5c.

**SALAMANDER.** One of the most satisfactory outdoor varieties. Resists dry weather, heads large, light green, not very solid; inner leaves finely blanch. Pkt., 5c.

**DENVER MARKET.** Bright green, clustering, loose, medium size head. Inner leaves finely crumpled and well blanch. Desirable outdoor or forcing variety. Pkt., 5c.

### CABBAGE OR HEADING VARIETIES—Continued.

**NEW YORK, or WONDERFUL.** (Neapolitan Cabbage). The largest head lettuce produced. Heads 15 to 18 inches across. Blanches beautifully, crisp, tender, free from bitterness. For an outdoor, long season variety, it has no rival. Pkt., 5c.

**COS LETTUCE (Romaine).** Cos Lettuce is grown extensively in Europe, but not so well known in this country as the Cabbage Lettuces. They are, however, coming rapidly into use, and wherever tried are considered best of all. Leaves long, narrow, spoon-shaped, folding into loose sugar-loaf shaped heads which blanch better by having the outer leaves tied about them. Sow early in spring in rows 18 inches apart, covering  $\frac{1}{2}$  inch deep. When plants have two or three leaves thin to three or four inches apart. Pkt., 5c.

### Giant White Curled or Loose Leaf

**BLACK SEEDED SIMPSON.** One of the best for sowing outdoors where an exceedingly tender leaf is desired, and for those markets which demand a very large, loose clustering sort of yellowish-green color. It is used also for growing under glass or in frames. Leaves ruffled and blistered and even the large outer ones are very tender. Pkt., 5c.

**GRAND RAPIDS.** Of highest merit as a forcing variety. Owing to its peculiar upright habit of growth, it economizes in bench room and in a short time produces a mass of beautifully frilled leaves of splendid quality for the table or for shipping. It is also an attractive and desirable variety for growing outside in the home garden. Pkt., 5c.



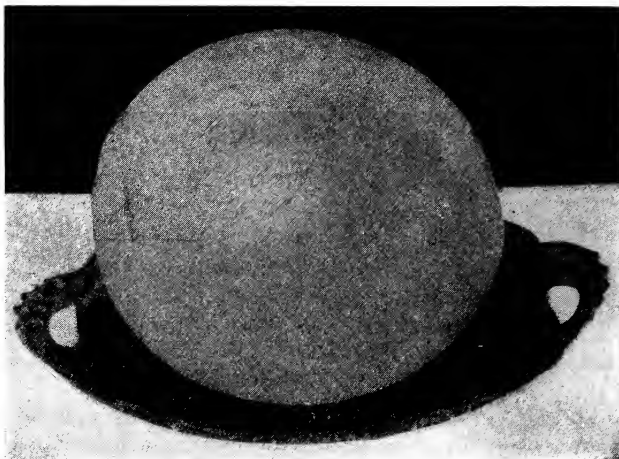
Field of Grand Rapids Lettuce.

## Muskmelons

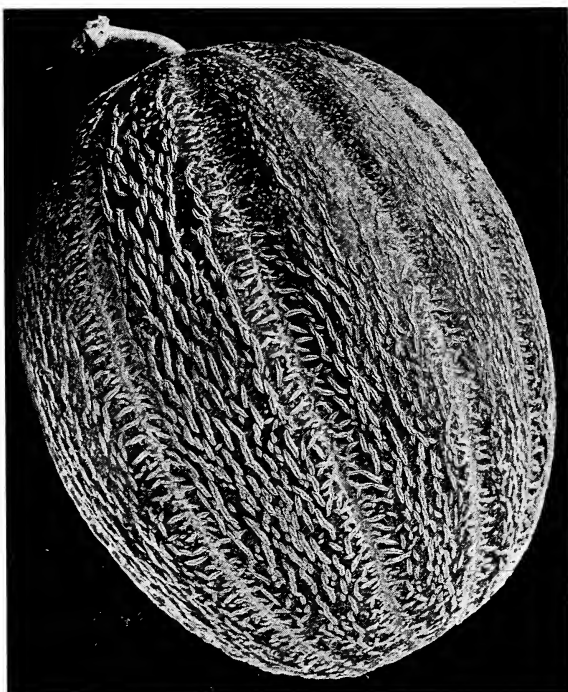
Prepare hills 4 to 6 feet apart in a rich, moderately dry soil, thoroughly mixing therewith well rotted manure. Early in May, or when the ground has become warm, plant 10 or 12 seeds one inch deep in each hill, afterwards thinning out so that 3 or 4 plants remain. Pinch the vines when blossoming begins, to promote fruitfulness, and cultivate till the vines cover the ground. To combat insect attacks, dust with ashes, lime, or road dust. Use Slug Shot for bugs and spray with Black Leaf 40 for lice.

### Honey Dew A NEW MUSKMELON

It is not a Casaba, the seed cavity being like an ordinary cantaloupe. Color dull white when ripe, average weight 8 to 10 pounds, and all melons nearly the same size. The Honey Dew has no netting, rind thin but very tough and keeps the flesh in good condition two to three months after gathering. Color of flesh a rich green from close to the rind to the seed cavity. Flavor most delicious, having the sweetness of honey and the freshness of morning dew. We recommend for Northern States, planting seeds in pots or cold frames after April 15th and setting plants in open ground June 10th to 20th. **Pkt., 10c.**



Honey Dew Melon.



Rocky Ford.

### ORANGE OR SALMON-FLESHED VARIETIES—Continued.

**MILLER'S CREAM, or OSAGE.** Medium to large size, of excellent quality. Vigorous and productive. Fruits oval, dark green, slightly ribbed. Flesh salmon color, thick, fine grained, highly flavored. A favorite variety for the later market. **Pkt., 5c.**

### Tip Top

This wonderfully fine melon should be planted by all melon growers. It always pleases. The testimony of all who use **Tip Top** is that every melon produced, whether big or little, early or late, is a good one; sweet, juicy, finest flavor, firm-fleshed and eatable to the outside coating. Its appearance on the market is very attractive—sells on sight. The fruits are of large size, nearly round, evenly ribbed and moderately netted. Flesh rich deep salmon, sweet and spicy, very juicy. **Pkt., 5c.**

### Green-Fleshed Varieties

**ROCKY FORD.** Has become one of the most popular small or crate melons and is shipped in large quantities from Colorado and Arizona. Vines are vigorous and productive. Fruits oval, slightly ribbed, densely covered with fine netting. Flesh is green, very sweet, highly flavored. **Pkt., 5c.**

**BANANA.** This melon is delightfully fragrant; flesh salmon color, and so thick that the melon is nearly solid; flavor resembling a banana, and when thoroughly ripe very delicious. Grows 20 to 28 in. long; very prolific. **Pkt., 5c.**

**DELICIOUS GOLD LINED.** This grand melon is almost round, heavily netted, the netting giving it a lace-like appearance. The thick, green flesh has a gold lining next the seed cavity, making it, when served, the most attractive melon grown. **Pkt., 10c.**

**HACKENSACK.** Extra early. Very popular with market gardeners, as it is the earliest of the large melons. Fruit good size, round and heavily netted. Flesh green, sweet and fine flavor. One of the best as well as one of the earliest, hardiest and most profitable of netted melons. **Pkt., 5c.**

### Orange or Salmon-Fleshed Varieties

**HOODOO.** A new orange fleshed variety, ideal as a shipping melon and of the very finest quality. Vine vigorous, remarkably blight resisting and very productive. Netting exceptionally fine and dense, extending practically over the entire surface. Fruits uniformly of medium size. **Pkt., 5c.**

**EMERALD GEM.** A very early, yellow-fleshed melon of small to medium size. One of the very best for the home garden. Vines vigorous and productive. Fruits globular or slightly flattened, somewhat irregularly ribbed and very slightly netted. **Pkt., 5c.**



Extra Early Hackensack.

## Watermelons

A light, sandy soil, with good exposure to the sun, is best for Watermelons. It should be prepared deep, but receive shallow cultivation. Hoe often and thoroughly. Plant in hills 8 to 10 feet apart each way. Plant 8 to 10 seeds in a hill, and finally, when danger of insects is past, leave but three strong plants. One ounce will plant 30 hills. What we have said about Muc'melons applies with equal force to Watermelon seed. Large quantities of cheap seed, saved from Southern fields and taken from cull melons, are marketed at very low prices. Our stock is entirely from selected melons grown strictly for seed. To destroy lice spray with Black Leaf 40.

**ALABAMA SWEET.** A very large, long, deep green melon. Rind thin, but very tough; flesh bright red and very sweet; seeds white. One of the best shipping melons grown. **Pkt., 5c.**

**GEORGIA RATTLESNAKE, or GYPSY.** One of the largest, most popular melons grown. Fruit long, light green, striped with a darker shade. Flesh bright scarlet, very sweet and tender. Vines large and vigorous. Seed nearly white. One of the most desirable for either home or market. **Pkt., 5c.**

**KOLB'S GEM.** Very large, round, or slightly oval, marked with irregular light and dark stripes. Rind hard and firm, making it one of the best shipping sorts. Flesh bright red, a little coarse but sweet and tender. Vine vigorous and productive. Seeds black. **Pkt., 5c.**

**KLECKLEY'S SWEET, or MONTE CRISTO.** Unsurpassed for home and near market. Fruit medium to large, oblong. Flesh very bright, rich red, exceedingly sweet, crisp and tender. Not a good shipper. Vine vigorous and productive. **Pkt., 5c.**

**PEERLESS, or ICE CREAM.** One of the best early melons. Vine moderately vigorous, hardy and productive. Fruit medium size, oval, bright green, finely veined with a darker shade. Flesh bright scarlet, crisp and very sweet. Rind thin, seeds white. **Pkt., 5c.**



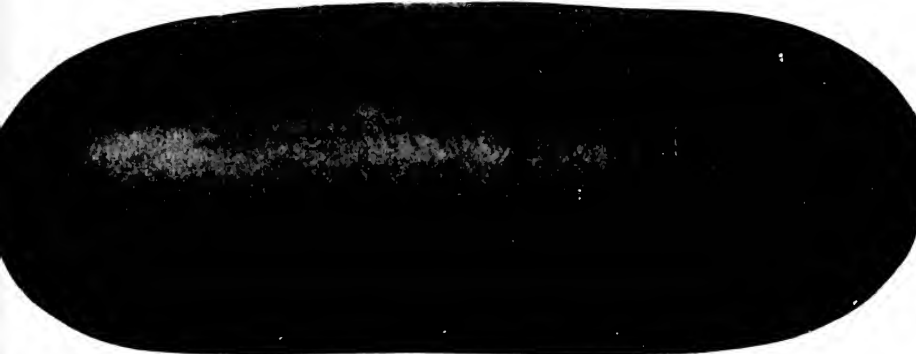
Sweetheart Watermelon.

**SWEETHEART.** Fruit one of the largest, oval, very heavy, rind thin, green, slightly veined. Flesh bright red, firm and very tender and sweet, remains in good condition long after ripening. Seed black. **Pkt., 5c.**

**HALBERT'S HONEY.** One of the best for local market. Fruit oblong, dark green, large. Flesh beautiful crimson and luscious flavor. Gardeners find this a very profitable melon for local markets. **Pkt., 5c.**

**HARRIS' EARLIEST.** An extra early melon of excellent quality. Fruit large for an early variety, oblong, broad stripes of light and dark green. Flesh bright red, tender and sweet. One of the best for Northern latitudes. **Pkt., 5c.**

**TOM WATSON.** Fruit very large, often weighing 50 to 60 pounds, dark mottled green. Flesh brilliant scarlet, heart very large and small seed space. Rind thin, but tough making it a splendid shipping melon. Tom Watson is one of the best for home use and market. **Pkt., 5c.**



Tom Watson Watermelon.

## Mustard

Mustard is not only used as a condiment, but the green leaves are used as a salad or cut and boiled like spinach. Sow in drills about 18 inches apart, covering one-half inch deep. For succession, sow every few weeks till autumn. Water freely. In the South the seed should be sown in autumn, the plants used early in spring for greens.

**SOUTHERN GIANT CURLED.** Extensively used in the South as a spring salad and for greens. Leaves light green; much crimped and frilled. Seed small, reddish brown to nearly black. **Pkt., 5c.**

**OSTRICH PLUME.** A careful study of the different types of curled mustard has convinced us there is not much difference in them; if anything, the Ostrich Plume does not grow quite as large as the Southern Giant Curled. **Pkt., 5c.**

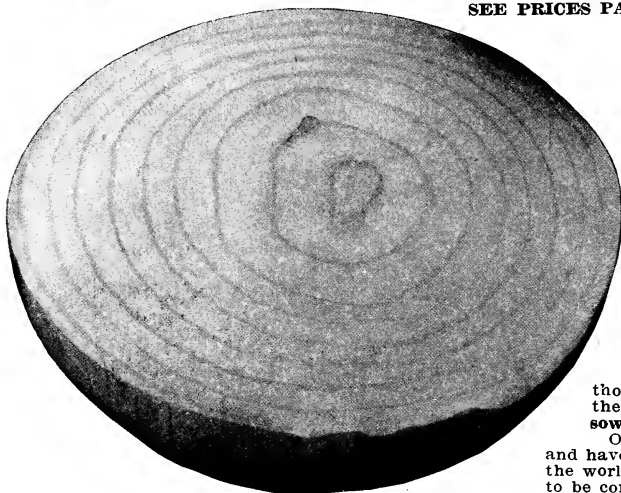
## Virginia Peanuts

These Peanuts are successfully grown in the North, producing strong, vigorous plants 18 inches high and very productive, thriving best on light, sandy soil.

**VIRGINIA BUSH, or CLUSTER.** **Pkt., 10c.**  
**VIRGINIA RUNNING.** **Pkt., 10c.**



Giant Southern Curled Mustard.



White Portugal.

## Onions

We pride ourselves on supplying the VERY BEST ONION SEEDS that can be produced. Yields the past season have been 50 to 75 per cent of an average, but fortunately we contracted a large acreage, so that we have a fair supply of EXTRA FINE STOCK, but at our very low prices expect it will be exhausted early. Our stock is 1919 crop, tests showing exceptional germination. REGARDLESS OF PRICE, THERE IS NONE BETTER.

The Onion is most successfully grown in a rich, sandy loam. Continued cultivation upon the same plot of ground, contrary to the general rule, rather improves the ground than otherwise. As early as the ground can be worked in the spring, sow the seed in drills 14 inches apart, covering half an inch. When the plants first appear in the rows, commence hoeing, just skimming the surface. Subsequently, weed thoroughly and carefully by hand. When the tops die, pull the onions and spread evenly over the ground; stir or turn until thoroughly dried, then cut the top off one-half inch from the bulb. Winter in a frost-proof place. One ounce will sow 200 feet of drill; 4 to 5 lbs. per acre.

Onion Seed is one of our specialties. We make it a study and have it grown from selected bulbs in a district that is known the world over as producing the best onion seed known. It is not to be compared with the cheap seed sold through brokers to seed houses. The supply is limited to growers' contracts, hence no old stock carried over; its freshness and origin are known; it is the only safe kind to use.

**AUSTRALIAN BROWN.** An extra early, medium sized onion, resembling somewhat the Danvers in size and shape; skin bright yellowish brown color, flesh white and mild flavor. This is one of the surest croppers and possesses the longest keeping qualities of any onion grown, having been kept in good condition for a whole year or more. One of the most desirable. Pkt., 5c.

**LARGE RED WETHERSFIELD.** We have a very fine and select strain of this sort. Color is a deep purplish red, flesh white, moderately grained and very firm. Yields an enormous amount per acre. The magnificent large, solid onions are nearly as mild in flavor as many varieties with skin of lighter coloring. Its splendid keeping qualities make it easy to hold crops for late winter markets. Pkt., 5c.

**EXTRA EARLY RUSSETT.** Ten days to two weeks earlier than Red Wethersfield. Color russet brown, flesh very white and mild; splendid keeper, heavy yielder, and a much better early onion than the Extra Early Red generally offered. Pkt., 5c.

**PRIZETAKER, or MAMMOTH YELLOW SPANISH.** Grows to an immense size, and for fall marketing is unexcelled. Although of such great size, it is very hardy and a fair winter keeper, as it ripens up hard and firm; very fine grained, and of mild, delicate flavor. The outside skin is rich yellow, while the flesh is white. To get the best results from this onion, the seed is sown in beds and transplanted. It will, however, make a good crop if sown in the ordinary way. Pkt., 5c.

## Egyptian Winter or Red Perennial Onion Sets

A hardy Onion for September and October Planting. Orders Booked Now.

Entirely distinct from all other varieties of onion; being perfectly hardy everywhere. They should be planted in the fall and left in the ground all winter. These sets never form large bulbs but produce the earliest, small, green onions ready for home or market use weeks ahead of any other sort, unsurpassed in sweetness and tenderness. It is best to replant every autumn and use both roots and tops the following spring. Slight winter protection is required, just a few inches of coarse litter spread on the crowns after the ground freezes, to prevent root heaving. 1 lb., 20c; 2 lbs., 35c.



Onion Sets.

**WHITE PORTUGAL, or SILVER SKIN.** The bulbs grow to good size, ripening evenly; silvery white and very mild. A favorite for bunching when sown thick, about 25 lbs. of seed to the acre; produces the finest pickling onions and one of the best for sets; also remarkable for their keeping qualities. Pkt., 5c.

**YELLOW GLOBE DANVERS.** This fine onion is of large size. An early and abundant cropper. Bulbs very thick, flat, or slightly convex bottoms, full oval top with small neck and rich brownish yellow skin. Pkt., 5c.

**MICHIGAN YELLOW GLOBE.**

Large, uniformly spherical, with small necks and the largest diameter below center of bulbs, of a rich orange color. Pkt., 5c.

**OHIO YELLOW GLOBE.** An early Globe Onion, small neck and uniform in size and color. Popular in the marsh and onion section of Ohio and Indiana. Pkt., 5c.

**SOUTHPORT RED GLOBE.** This is a fine keeper. Large size and considered one of the best red onions. Flesh is fine grained, very mild and tender. Pkt., 5c.

**SOUTHPORT WHITE GLOBE.** This grows to a very large size and is a perfectly globe-shaped onion. Color is a clear pure white. This variety is used by market gardeners for bunching. Pkt., 5c.

**SOUTHPORT YELLOW GLOBE.** A large, perfectly shaped Globe Onion and an excellent onion for keeping throughout the winter. A very heavy cropper, handsome in appearance, a good dark yellow color. Pkt., 5c.



Southport Red Globe.

## Bottom Onion Sets

These sets are grown from seed and when planted produce the earliest green onions; also large onions can be grown from them much quicker than from seed. Our sets are from choice seed grown and handled by the most approved methods. Plant as early in the spring as ground can be prepared.

Yellow, postpaid ..... \$0.25 \$0.35  
White, postpaid ..... .25 .45

Ask for Special Bushel Prices.

## English Multiplier Sets

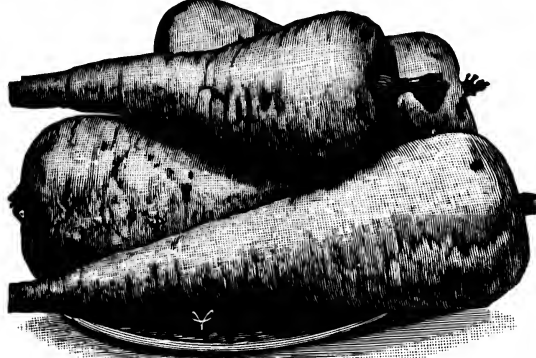
The large bulbs when planted multiply and send up six to ten stalks; the small sets produce fine large bulbs. Valuable for bunching or an early crop of large bulbs. Easy to grow; productive. Lb., 25c; 2 lbs., 35c, postpaid.

## Parsley

One ounce will sow 100 feet of drill. Requires a rich, mellow, rather deep soil. Sow early in spring in drills a foot apart and half an inch deep. Soak the seed previously to sowing in warm, not hot water, which will facilitate germination. Leave soaking for about six hours. Thin out the young plants when large enough.

**CHAMPION MOSS CURLED.** A most prettily curled sort. Rather dwarf, of a shiny rich green color. Very ornamental, being much used for garnishing. Pkt., 5c.

**HAMBURG, or TURNIP ROOTED.** The root is the edible portion and resembles a parsnip. Foliage very much the same as the plain.



Hollow Crown Parsnips.

## Peppers

Sow in a hotbed in April and transplant to the open ground when the weather is favorable. They should be planted in warm, mellow soil, in rows 18 inches apart. They may also be sown in the open ground when the danger of frost is past and the soil is warm and weather settled. Thorough and frequent cultivation should be kept up until frost, by this means you can have a continuous crop.

**SPANISH JUMBO.** This magnificent variety is the largest, sweetest and finest flavored red pepper grown. On account of their large size and mild, sweet flavor, they are especially desirable for stuffing, pepper hash, mixed pickles, and other dishes in which peppers are used. Being easily grown, they should be planted in every garden. Pkt., 10c.

**LARGE BELL, or BULL NOSE.** A very large sort of inverted bell shape, suitable for a filling or for a mixed pickle. Flesh thick, hard and less pungent than most other sorts. Pkt., 5c.

**CHINESE GIANT PEPPER.** Without doubt one of the very best and largest Mango Peppers ever introduced. Its mammoth size, splendid shape, beautiful, rich, glossy-red flesh and mild flavor, all lead us to speak well of it. Pkt., 10c.

## Perfection Pimento Pepper

The illustration shows a longitudinal section of a ripe Perfection Pimento Pepper, about one-half natural size. This is the best and most perfectly developed pepper of the Pimento family ever produced, and represents several years of careful cultivation and improvement. This pepper, while one of the best for general use, is what its name implies, Perfection, for canning. Note the thick outer flesh and solid center. It is smooth and uniform in size and shape, so that skins are easily slipped off by burning a few seconds over a hot fire, or by boiling a few minutes in water, or, it may be pared like an apple. It is the mildest of all peppers, sweet and possesses the same rich flavor as the imported pimento sold in cans and bottles at fancy prices. Why not produce your own supply of this rich delicacy at a mere fraction of what you pay at the stores? Pkt., 10c.



Connecticut Field Pumpkin.



Champion Moss Curled Parsley.

Roots can be dug late in the fall and stored in sand. Splendid for flavoring soups and stews. Pkt., 5c.

## Parsnips

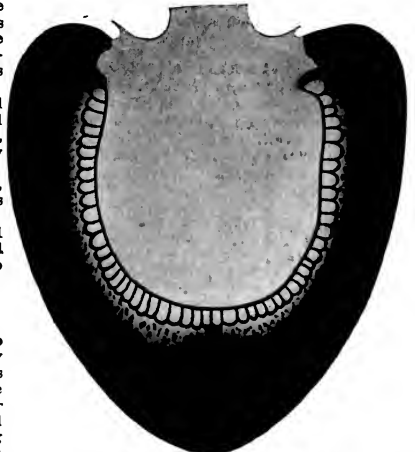
One ounce will sow 100 feet of drill. Requires rich, well manured soil. Sow the seed early in spring in drills 18 inches apart, covering with fine soil to the depth of half an inch. Thin out the young plants to five inches apart and cultivate well, keeping free from weeds.

**HOLLOW CROWN.** An old standard sort, long, sweet, and very productive. One of the very best varieties for general cultivation. Pkt., 5c.

**IMP. GUERNSEY.** This is a good, half-long variety, having smooth roots. It is of good quality and recommended for the family garden. Pkt., 5c.

## Combination Offer

Our Combination Offer on inside front cover is worth your attention. Every item in the list is one of special merit and the price offered is only half the value of the lot. Our object is to induce those who have not used our seeds to give them a trial.



Perfection Pimento Pepper.

## Pumpkins

Pumpkins are generally planted in corn, but a crop may be profitably raised in fields by themselves. One pound to 200 hills; four to six pounds for an acre.

**MAMMOTH GOLDEN CUSHAW.** An improvement on the old light colored Cushaw. Skin yellow. Flesh yellow, fine grained, excellent for pies. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.20, postpaid.

**JAPANESE PIE.** A valuable new pumpkin of Japanese origin. Flesh very thick, rich salmon color, dry and sweet. Very productive and valuable for pies and cooking. Pkt., 5c; oz., 10c; ¼ lb., 35c; lb., \$1.25, postpaid.

**CONNECTICUT FIELD, or LARGE YELLOW.** The pumpkin most extensively grown for stock feeding; also used for making pies. Grows to a large size. Flesh very thick, rich yellow, fine grained and highly flavored. Usually planted with corn and very productive. Pkt., 5c; oz., 10c; ¼ lb., 40c; lb., \$1.35, postpaid.

## Crimson Beauty Tomato

Growers who have tried this grand Tomato are unanimous in saying it is the best they have ever grown. Not alone in our section, but almost every state in the Union, wet or dry, hot or cool, all seem to have equal results. Read what they say.



## Northern Grown Seed Peas

Our seed Peas are true to name, grown under most careful attention and closely handpicked. None better can be furnished.

Peas mature earliest in a light, rich soil; for the general crop, a moderately heavy soil is best. Commence sowing the early varieties as soon as the ground can be worked, continue for a succession every two weeks until June. It is a good plan to sow the early, second early and the late varieties at the same time for a succession. One quart for 100 feet of drill; two to three bushels for an acre. The wrinkled varieties are more susceptible to cold, wet weather than the small, round, hard sorts, hence should not be planted very early, except in warm, dry locations. They are sweeter and better flavored. Our Seed Peas are grown under the supervision of one of the most expert pea men in the country, in a section best adapted to the production of the crop, and our strains are of the highest development.

### Extra Early Varieties

**EXTRA EARLY PEDIGREE.** The earliest of all peas. Vines of medium growth, vigorous and productive. Pods large for so early a pea, containing 5 to 8 sweet, fine flavored peas. Coming as they do, 6 to 10 days earlier than Alaska, they are especially valuable to the market gardener who wants to be on the market first. They are equally desirable for the home garden. This is a grand pea and we strongly recommend them to all growers who wish to have the first and best early pea. **Pkt., 10c.**

**ALASKA, or EARLIEST OF ALL.** Vines of medium height. Pods good size, well filled. Seed small, bluish green and good flavor. Crop matures evenly, making it a valuable variety for market gardeners and canners. Very early. **Large pkt., 10c.**

**THOMAS LAXTON.** A very early wrinkled variety. The pods are large, often four inches long and well filled. The green peas are very large and unsurpassed in quality. One of the very best peas yet introduced, and a favorite with market gardeners. **Large pkt., 10c.**

**AMERICAN WONDER.** The earliest of the dwarf wrinkled vari-

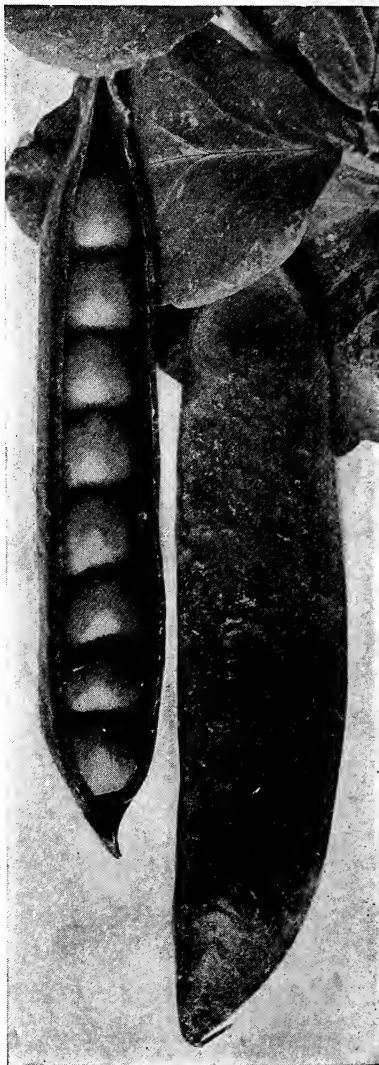
eties and very productive. Pods are of medium size and contain five to eight peas. Peas large, sweet, tender and fine flavored. Highly recommended. **Large pkt., 10c.**

**SUTTON'S EXCELSIOR.** An early wrinkled variety. Pods large, well filled. Vines 14 to 16 inches tall. Productive. Peas large and of unsurpassed quality. One of the best for market or home garden. **Large pkt., 10c.**

**GRADUS.** A very early wrinkled pea. Vines medium height. Pods very large and well filled. Peas large and splendid quality, retaining their green color after cooking. One of the very best. **Large pkt., 10c.**

**LITTLE MARVEL.** Vines about 18 inches high. Early and enormously productive. Pods filled with large wrinkled blue-green peas, of delicious flavor. This pea is taking the place of many of the older sorts and is ideal for the home garden. **Large pkt., 10c.**

**PREMIUM GEM, CARTER'S.** An improved strain and better than McLean's Little Gem. Vine 15 in., very productive. Pods medium size, filled with 6 to 8 peas of fine quality. Peas large, green, and wrinkled. **Large pkt., 10c.**



Telephone.

### Second Early Varieties

**THE ADMIRAL.** Vines about 4 feet high, vigorous and productive. Pods medium size and crowded with 6 to 9 peas of finest quality. Peas much wrinkled, sweet, and of finest flavor. One of the very best peas and a favorite with canners. **Large pkt., 10c.**

**TELEPHONE, ALLEN'S IMPROVED.** Vines tall and vigorous. The leading pea with gardeners and one of the best for home use. Pods very large and filled with

large, tender, sweet peas of excellent flavor. One of the best for home and market garden. **Large pkt., 10c.**

**BLISS' EVERBEARING.** Vines medium height and productive. Pods medium size and if kept closely picked, vines will throw out branches bearing pods maturing in succession. Peas large, sweet, fine flavor and preferred by many to any other kind. **Large pkt., 10c.**

### Late Varieties

**HORSFORD'S MARKET GARDEN.** The vines of this splendid variety grow about three feet high, are hardy and very productive, bearing a larger number of pods than any other variety. Pods are of medium size and contain five to seven peas each. Peas medium size, sweet and dark green color. It is not surpassed for either home or market garden. **Pkt., 10c.**

**BLACKEYE MARROWFAT.** Vines tall, vigorous, and very prolific. Peas large, smooth, round, and with a black eye. **Large pkt., 10c.**

**STRATAGEM.** Vines medium height, Pods very large and filled with very large, dark green, wrinkled peas of finest quality. **Large pkt., 10c.**

#### LATE VARIETIES—Continued.

**WHITE MARROWFAT.** Vines tall; one of the most productive of garden peas. Peas large, round, smooth, and excellent for summer use. **Large pkt., 10c.**

**CHAMPION OF ENGLAND.** Vines tall and very productive. Pods large and well filled. Peas large, wrinkled, and equal in quality to any pea grown; in fact, one of the very best for home and market garden. **Large pkt., 10c.**

## Field Peas

We make a specialty of Canada Field Peas, which are grown extensively in Michigan, and for seed purposes are regarded as the best that are produced. As a forage crop they are being grown more extensively every year. See page 33.

**"ONCE A CUSTOMER, ALWAYS A CUSTOMER."**

It is our aim to furnish the best seed that can be obtained. We expect every trial order will make a permanent customer.



## Radishes

One ounce will grow 100 feet of drill, ten pounds required for one acre. For the first crop sow as early in the spring as ground can be worked, and every two weeks throughout the season for a succession. A warm, sandy loam, made rich and light by some good strong manure, will be most likely to make them brittle and free from worms. Sow in drills 10 to 12 inches apart. The winter varieties should be sown in July and August. Like the turnip, they make the best growth in the autumn, and must be taken up before frost, and stored in a cool cellar, in sand, or in a pit, where they will keep tender and crisp all winter. To prevent the root maggot working in radishes, we recommend planting in soil where radishes, cabbages or turnips were not grown the previous year, and the use of Carco (see inside back cover), which is said to be a positive preventative of root maggots. It has been used successfully on the Pacific Coast for several years, where it had become quite impossible to grow radishes for table use until this discovery.

**EARLY SCARLET GLOBE.** Slightly olive-shaped, bright scarlet; flesh white and tender. One of the very earliest varieties grown and highly recommended to gardeners for its size, as first forcing radish. **Pkt., 5c.**

**SCARLET TURNIP, EARLY.** One of the most attractive for its beautiful color, but little later than the Early Scarlet Globe. Roots nearly round, with white tips. Excellent for forcing. Color, bright scarlet. Flesh white and brittle. A favorite with gardeners and for general culture. **Pkt., 5c.**

**ICICLE.** Often listed under other names. Is without doubt the very best long white radish grown. Roots long, slender, pure white, very sweet and crisp. A rapid grower and one of the most desirable radishes for outdoor planting, also adapted for forcing. Our seed is a high strain. **Pkt., 5c.**

## Winter Varieties

**CHINESE ROSE.** Roots cylindrical or largest near the bottom. Skin smooth, bright deep rose. Flesh white, firm, crisp and pungent. Roots four to five inches long. Grown extensively for fall and winter use. Sometimes called Scarlet China. **Pkt., 5c.**

**CHINESE WHITE, or CELESTIAL.** Roots long, cylindrical, beautiful white skin and flesh. Whitest and best pungent of the winter varieties. Grows six to nine inches long and two or more inches in diameter. Flesh solid and crisp. Highly recommended for winter use. **Pkt., 5c.**

**LONG BLACK SPANISH.** Roots long, thick, almost black, and pungent. Flesh white, solid, crisp, and good flavor. One of the latest and hardest of the winter varieties. **Pkt., 5c.**



Early Scarlet Globe.

**FRENCH BREAKFAST.** A quick-growing, olive-shaped root, beautiful bright scarlet, with white tip, small top and early. Desirable for growing under glass and for the garden. **Pkt., 5c.**

**BRIGHTEST LONG SCARLET.** A standard variety. Excellent for home and market garden. Short top. Roots smooth, tender, and very attractive. Grown extensively by market gardeners and a favorite in the home garden. **Pkt., 5c.**

**CINCINNATI MARKET.** Similar to the Long Scarlet, but averages longer, deeper red, and remains in condition a little longer. Roots slender and often six inches long before becoming pithy. Considered one of the very best long red varieties. **Pkt., 5c.**

**CRIMSON GIANT, FORCING.** A round radish, very large for so early a variety. The root is nearly globe-shaped, beautiful crimson color, and often reaches an inch and a half in diameter before becoming pithy. Highly recommended for outdoor planting, also for forcing. **Pkt., 5c.**

**IMPROVED CHARTER.** Scarlet, shading to white. Roots are in good condition for the table when half an inch in diameter and remain in good condition until an inch or more in diameter. Excellent quality, flesh hard and crisp. One of the best outdoor varieties. **Pkt., 5c.**



Icicle.

## Rhubarb

The earliest of spring vegetables. Sow in drills an inch deep, thin out to six inches apart. In the fall transplant in hills 3 feet apart in highly manured, deeply stirred soil. **Pkt., 5c.**



Savoy Leaved Spinach.

## Spinach

This is an important crop for the market gardener. It is of easy cultivation. Sow for main crop in September, either broadcast or in drills, one foot apart and one inch deep, in rich soil; the stronger the ground, the more delicate and succulent will be the leaves. Protect during the winter with hay or straw. For spring and summer use, sow as soon as the ground can be worked, and every two weeks for succession. One ounce for 100 feet of drill; ten to twelve pounds per acre.

**GIANT THICK LEAVED.** An early variety; very hardy and of good quality. Large round leaves, nearly smooth, of dark green color; favorite with market gardeners. **Pkt., 5c.**

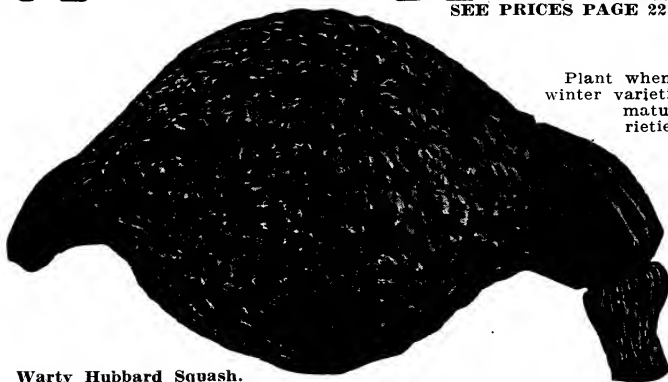
**PRICKLY WINTER.** Use for fall sowing, as it is extremely hardy. Seeds prickly, leaves not so large as those of other varieties. **Pkt., 5c.**

**BLOOMSDALE, or SAVOY LEAVED.** Of upright growth; leaves curled and crimped, thick and fleshy. Keeps well after cutting. Suitable for fall sowing. **Pkt., 5c.**

## Salsify or Vegetable Oyster

Sow the seed early in spring, in drills one foot apart and one inch deep, thinning out young plants to four inches.

**MAMMOTH SANDWICH ISLAND.** The largest, smoothest, and the very best in every way of all salsify. Pure white, very tender, and of excellent quality. **Pkt., 10c.**



Warty Hubbard Squash.

## Early Summer Varieties

**EARLY YELLOW BUSH.** Very early variety, scalloped, somewhat flattened and medium size. Skin deep orange; flesh pale yellow, and good flavor. Pkt., 5c.

**MAMMOTH WHITE BUSH.** An early, round, flat squash; color clear white, handsomely scalloped. Called Patty Pan in the South. Largely planted in every section of the country. Pkt., 5c.

**EARLY WHITE BUSH, or PATTY PAN.** Is earlier than any other variety of dwarf habit; very productive. Summer squashes should always be used when young and tender, which can be determined by an impression of the nail. Pkt., 5c.

**MAMMOTH SUMMER CROCKNECK.** A well known and standard variety. Grows from 18 inches to two feet in length. The shell is hard and warted and of an attractive bright yellow color. The thick flesh is of good quality. Pkt., 5c.

## Squash

Plant when all danger from frost is past, and get in the winter varieties as soon as possible in order that they may mature. Plant in hills 4 feet apart, for the bush varieties, and 6 to 8 feet apart for the running sorts.

Put 6 or 8 seeds in a hill, thinning when all danger from insects is past to 3 or 4 plants in a hill. One ounce for 50 hills; 4 to 6 pounds per acre.

Michigan produces the best vine seeds in the world. In no place will you find better squash, pumpkin and cucumber than you will here. Our soil and climate are particularly adapted to their production in their most perfect type and best quality. Those planting them will find that they produce better results than can be obtained from seeds grown in any other locality.

## Fall and Winter Varieties

**DELICIOUS.** This is a new variety for which there is an increasing demand. It is top-shaped, of medium size. Hard green shell. Flesh deep yellow, rich, fine grained, splendid for cooking. Pkt., 5c.

**RED, or GOLDEN HUBBARD.** A perfect type of the Green Hubbard, except in color, which is a bright, deep orange yellow, very showy and attractive. Flesh deep golden yellow, much richer in color than Hubbard, fine grained, cooks very dry, and is of excellent flavor. Its keeping qualities are fully equal to, while in productiveness it far excels the green variety. Pkt., 5c.

**GENUINE WARTY HUBBARD.** This is the king of all squashes. It is a little bigger and rougher than the old Hubbard, and darker green. The standard winter squash; grown perhaps more generally than any other variety. Flesh bright orange yellow, fine grained, very dry, sweet flavored. Boils or bakes exceedingly dry, and is esteemed by many to be as good baked as a sweet potato. We have taken the utmost pains with this sort, and can recommend our stock as, in all probability, the best in the country. Pkt., 5c.

# Northern Grown Seed Potatoes

**PRICES.** At the time our list goes to the printer, it is impossible to know what the condition may be next spring. Ask for our Special Quantity Prices and we will send you our Current Farm Seed Price List.

**SHIPPING.** We will ship any time ordered if customer assumes risk of freezing; otherwise will hold orders till we consider weather safe.

**PACKAGES.** Unless otherwise ordered, we ship in sacks holding 2½ bushels, no charge for sack. If barrels are wanted, add 25c per bushel to prices quoted.

**EARLY OHIO.** The Early Ohio is, without doubt, more widely grown than any other early variety. It was originated in 1871, as a seedling from the Early Rose. Grown side by side with the Early Rose, it was found to be several days earlier and its yield one-third greater. Is similar to the Early Rose in color, but quite distinct in shape, being round-oblong instead of over-oblong. For cooking and keeping qualities this potato is without a superior. Our seed is grown in the celebrated Red River Valley, where the choicest stock in the country is obtained. 5 lbs., 65c, postpaid. Ask for our Special Price List.

**RURAL NEW YORKER.** This splendid potato is one of the most widely cultivated. Oblong, inclined to round or round oval, flattened; eyes few, shallow; skin pure white; flesh white. Medium late. 5 lbs., 65c, postpaid. Ask for our Special Price List.

## The Best General Purpose Potato Grown

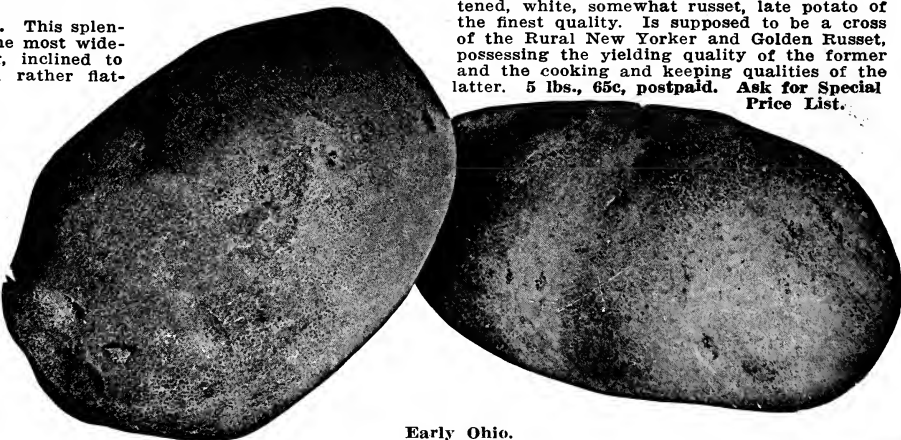
**EARLY PETOSKEY.** This is one of the earliest, at the same time, makes one of the best potatoes for storing and winter use that is grown. Planted early the crop is ready for digging fully as soon as the Early Ohio, but if planted a little later a crop will mature before the late varieties and will carry through the winter as well as any of the later sorts. It is without a superior for cooking qualities. Flesh very white, cooks dry and mealy, and for baking, it has no equal. In shape and size, the Petoskey is all that can be desired; round to slightly flat, medium size and run very uniform, slightly russet skin; extremely shallow eyes, and never hollow. Vines of strong, vigorous growth, flowers light purple and borne in great profusion. For yield, it is one of the most prolific. As a market potato and for home consumption, the Early Petoskey is without a rival; being of an early type, they are sure to mature, even if planted late, and many of the large growers in Michigan, where the variety originated, grow nothing else, either for market or their own use. We recommend this potato as the best of all for any purpose. 5 lbs., 65c, postpaid. Ask for our Special Price List.

**STEUBEN SPECIAL.** A medium size, oval, slightly flattened, white, somewhat russet, late potato of the finest quality. Is supposed to be a cross of the Rural New Yorker and Golden Russet, possessing the yielding quality of the former and the cooking and keeping qualities of the latter. 5 lbs., 65c, postpaid. Ask for Special Price List.

## USE

## Adheso

To control early and late blight, bugs, worms and insects on beans, beets, melons, cabbage, cauliflower, celery, peppers, and tomatoes. **FOR POTATOES** use it according to directions.



Early Ohio.

SEE PRICES PAGE 22.

## Tomatoes

Good plants can be grown where a frame is not available, from early February on in the house in boxes. Where a hotbed is handy, sow the seed, giving good bottom heat in February to March, and when the plants are three inches high, transplant into other frames about 4 or 5 inches apart each way or plant into boxes which can be placed in the frames. Do not set the young plants in the open before all danger of frost is over, which is generally end of May to first week in June. Being very tender, they will not bear the least frost. Choose a light sandy or gravelly loam in sheltered situation, and if possible with southern exposure if early fruit is desired.

**CRIMSON BEAUTY.** We have no hesitation in pronouncing this the very earliest good tomato yet offered. While being fully as early as any other variety, it possesses qualities not found in any other early sort. Vines vigorous and exceedingly productive. Fruit bright crimson, large, smooth, coreless, and very few seeds. For shipping, no other early variety approaches it, and for slicing it is positively without a rival. Owing to the very limited supply of seeds we are offering only packages and ounces. **Pkt., 10c.**

**SPARK'S EARLIANA.** We offer the finest strain of this remarkable early tomato. Without doubt the best early variety yet introduced. Vine small but vigorous and productive. Fruit large, smooth, uniform, nearly round, deep scarlet, solid. Is borne in clusters near the base of the plant. A very prolific sort for market gardeners. **Pkt., 5c.**

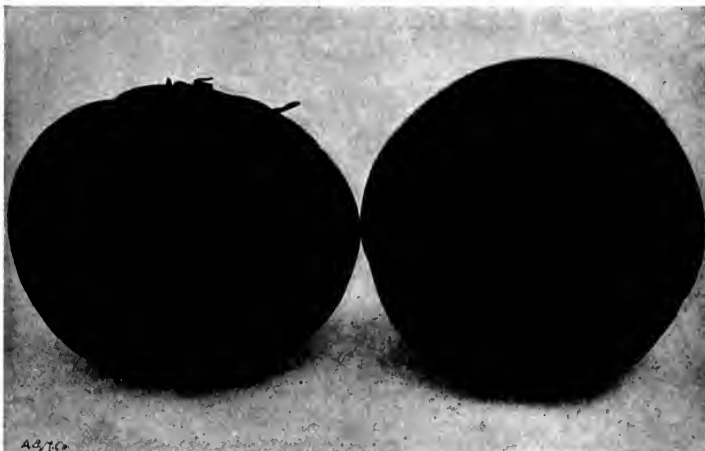
**JOHN BAER.** Of vigorous but medium growth, the vines stand good manuring and are enormously productive. Fruit of good size, bright red, extremely smooth, coreless, and very firm. In many respects this is without doubt one of the very best early tomatoes yet produced. **Pkt., 10c.**

**MATCHLESS.** Large, smooth, symmetrical, bright red, solid and meaty. Popular main crop variety in the East; highly recommended. **Pkt., 5c.**

**ACME.** Well known medium early tomato of great value. Vine large, hardy and productive. Fruit purplish-pink, round, smooth, good size, and stands shipping. Flesh solid and of excellent flavor. Very desirable for home and market gardens. **Pkt., 5c.**

**EARLY DETROIT.** Largest and best formed of the early purple fruited sorts. Vine vigorous and very productive. Fruit is very smooth, uniform in size, firm, and excellent quality. One of the best shipping early varieties yet introduced. **Pkt., 5c.**

**NEW STONE.** The best late main crop tomato grown. Vine large and very productive. Fruit is round, very smooth, deep scarlet and uniform. Unequaled for slicing and canning. Seed is of high strain and carefully grown. **Pkt., 5c.**



New Stone.

**BEAUTY.** Vigorous and productive. Ripens a little later than Acme; uniform in size, smooth, very solid, large, and splendid quality. One of the best medium early varieties. **Pkt., 5c.**

**PONDEROSA.** Very large, purplish-pink, fairly smooth, very solid, few seeds and not very acid. Fine for slicing. Medium early and one of the largest. **Pkt., 5c.**

**TRUCKER'S FAVORITE.** The finest large fruited purple tomato grown. Fruit continues of large size until the last, and is unexcelled for slicing or cooking. Try this excellent variety. **Pkt., 5c.**

**GOLDEN QUEEN.** Large, smooth; beautiful golden yellow; smooth and as well shaped as the best of the red varieties; of superior flavor. **Pkt., 5c.**

**YELLOW PLUM.** Fruit small, but little more than a half inch in diameter. Color deep yellow; flesh yellow and splendid flavor. Highly esteemed for preserves. **Pkt., 5c.**

## Tobacco

With the cost of tobacco mounting higher all the time, why not cut expenses and at the same time have a better article? Our seed is from the largest grower in the world; he does nothing else. Each variety adapted to our climate, and one for every purpose.

**Culture.**—Pulverize the soil of the seed bed thoroughly and work in a liberal application of hard wood ashes. Sow seed as soon as danger of frost is over. When plants are 6 inches high, transplant into hills 4 or 5 feet apart each way and cultivate frequently. One ounce of seed will produce plants for an acre.

**COMSTOCK'S SPANISH.** The favorite tobacco in the Wisconsin tobacco district and one of the most desirable for states north of the Ohio River. It is the standard cigar leaf type, and is considered the very best of cigar tobaccos. Leaf good size and suitable for wrappers or fillers. **Pkt., 10c.**

**CONNECTICUT SEED LEAF.** Grown in all sections of the United States and regarded as one of the finest for cigar fillers. Leaf fine texture and delightful flavor. **Pkt., 10c.**

**GENERAL GRANT.** This variety ranks among the first for cigars. Leaf sometimes 44 inches long, and is the earliest of all tobaccos, maturing as far north as Duluth, Minn. The size, texture, and shape of leaf makes this especially desirable for cigar and pipe. **Pkt., 10c.**

**BIG HAVANA.** A hybrid Havana or Cuban seed leaf. One of the earliest, fine texture, and superior flavor. Desirable for cigars and cigarettes, also as a blend for pipe. **Pkt., 10c.**

**SWEET ORINOCO.** This tobacco has received more praise than any other known variety, as a plug filler and when sun cured makes the best natural chewing leaf. Leaf long and narrow, fine grained, and excellent sweet flavor. **Pkt., 10c.**

**SLATE'S IMPROVED WHITE BURLEY.** The best of all the Burley types. Leaf large, broad and fine texture, making a most desirable plug filler and wrapper. **Pkt., 10c.**

**OUR MIXTURE.** For the accommodation of those who wish an assortment suitable for cigars, smoking blends, and chewing, without having to buy a larger quantity of seed than they require, we have prepared a most desirable mixture. **Pkt., 10c.**



Tobacco.

## Turnips

For early use, sow as soon as the ground opens in spring, in drills from 12 to 15 inches apart; thin out to 6 or 9 inches in the rows. For succession, continue to sow every two weeks until June; for fall and winter crop sow in July and August. The Rutabagas are grown for feeding stock, and are also excellent for the table. Take up the roots in November, or before severe frosts; cut off the tops within an inch of the crown, store in cool cellar or pit, or pile in a conical form out-of-doors, in dry ground; cover carefully with long straw, and finish by earthing up with about 12 or 15 inches of earth, leaving a trench around the heap to carry off water. **One ounce of seed for 150 feet of drill; one pound for an acre.**

**PURPLE TOP WHITE GLOBE.** A fine table turnip. It is an early and heavy cropper as well as a good keeper. The bulb is a very handsome globe, and is especially in demand among market gardeners. This is also a good turnip for stock feed, as it will grow to a large size if left for that purpose. **Pkt., 5c.**

**PURPLE TOP STRAP LEAF.** This is probably more extensively planted than any other variety. It is a very early, flat turnip of medium size, the lower portion white and the upper part reddish purple. The flesh is fine grained and sweet. A splendid table variety and desirable also for stock feed. **Pkt., 5c.**

**WHITE EGG.** Belongs to the class of quick-growing fall turnips, and for this purpose should be sown in this latitude between August 10th and 25th. **Pkt., 5c.**

**ORANGE JELLY, or GOLDEN BALL.** Undoubtedly among the most delicate and sweetest yellow fleshed turnips yet introduced. Not of large size, but firm, hardy and of excellent flavor. Keeps well; superior as a table variety. Extensively used. **Pkt., 5c.**

**EARLY WHITE FLAT DUTCH.** A popular, early, white, flat turnip of medium size. Smooth and of good quality. **Pkt., 5c.**

**COW HORN.** A long, white, carrot-shaped turnip, growing to a length of 12 to 14 inches. Flesh white and solid. Suitable for table use when small, and when matured excellent for feeding stock. This variety is sometimes planted to plow under as a fertilizer. See page 31. **Pkt., 5c.**

## Sunflower

**MAMMOTH RUSSIAN.** Heads very large and filled with striped seeds. This is the best and most prolific variety to grow for poultry. See page 32. **Pkt., 5c.**

## Sage

The most extensively used herb for seasoning and possesses medicinal virtues. Sow in drill one inch deep, transplant to two feet apart. Plants may be divided. Pick leaves and tender shoots just as plant is coming into bloom; dry quickly in shade. **Pkt., 10c; oz., 35c; ¼ lb., \$1.00, postpaid.**

## Sweet Peas

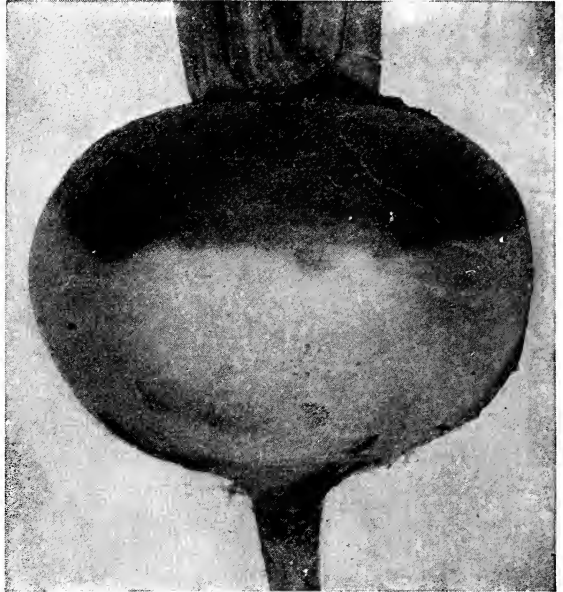
Sweet Peas, the most popular flower in America, are loved by everyone, both for their beautiful coloring and delightful fragrance. They will grow wherever the common garden peas can be raised.

Sweet Peas should be sown plentifully, as early as possible. They are usually grown in double rows with a wire trellis or a row of brush between. Make the drills about six inches deep and nine or ten inches apart. Change the location of the rows each season. At time of planting cover with one inch of soil only, and fill in the drills as the young plants grow, taking care not to cover the top of the plants. A deep soil enriched by bone and a sunny situation is best adapted for their beds.

**TRIAL GROUNDS MIXTURE.** Seed in this mixture is saved from the trials and contains all the varieties of the Grandiflora type produced by one of the largest growers in California. **Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., \$1.00, postpaid.**

## Giant "Spencer" Type Sweet Peas

The Spencer strain of Sweet Peas have all been derived from the original Countess Spencer, originated in England about fourteen years ago. The blossoms are much larger than the old Grandiflora type, and combine the most exquisite colors with decided orchid-shaped flowers, frequently measuring 2½ inches across. While profuse in bloom, the Spencer is a shy seeder, and for this reason the seed is limited in supply and expensive, some of the novelties commanding very high prices. **Pkt., 10c; ½ oz., 20c; 1 oz., 35c; ¼ lb., \$1.00, postpaid.**



Purple Top White Globe.

## Rutabaga

For feeding stock in the fall and winter there is nothing superior to Rutabagas, as they are much liked by all kinds of stock and serve to keep them in good condition. Ton for ton, they are worth one-third the price of the best Timothy hay.

**SWEET RUSSIAN, or WHITE SWEDE.** This very desirable variety is an excellent keeper and one of the best for table or stock. Tops small, strap-leaved. Roots very large, nearly globe-shaped, with small neck. Flesh white, very firm and sweet. Sometimes called Sweet Russian Turnip. **Pkt., 5c.**

**AMERICAN PURPLE TOP.** A very large, globe-shaped Rutabaga, yellow with purple top. Hardy, vigorous growing variety of excellent quality for the table and one of the best for stock feed. **Pkt., 5c.**

*I cultivated your Crimson Beauty Tomato this season for the first time, and am frank to say I am delighted with it. It is undoubtedly the finest early tomato I have ever seen. It is a heavy producer, fruit large, smooth, excellent quality, and ranks among the earliest.*—N. C. McDUGGLE, Hockingport, Ohio.

## Asters

### Mixed Mammoth Varieties.

The Aster seed we offer are grown by a specialist who makes this one crop his entire business, and the mixture contains some of the newest novelties that florists list at extreme prices. Asters are hardy, easily cultivated, for cutting one of the most useful and at the same time one of the most beautiful of flowers. **Pkt., 250 seeds, 15c; 2 for 25c; ¼ oz., 75c, postpaid.**

## Nasturtiums

No other annual will produce such a lavish profusion for so long a time with the small outlay of time and labor. The maximum of bloom is produced in thin soils, and never flags through the hottest weather. In soils too rich, leaves predominate, and the plants are apt to rot off in wet weather, especially if standing too close.

**TALL, or CLIMBING NASTURTIUMS.** **Pkt., 5c; oz., 15c; ¼ lb., 40c; lb., \$1.25, postpaid.**

**DWARF NASTURTIUMS.** **Pkt., 5c; oz., 15c; ¼ lb., 40c; lb., \$1.40, postpaid.**

*I am delighted with the big crop grown from your Potato Seed. They are much larger than I expected. One plant produced 36 fine tubers—some measuring 8 inches around.*—J. A. SMITH, Palermo, Ont., Canada.

*I planted your Crimson Beauty Tomato last spring and they are very fine for this year was so hot and dry, but they stood the heat all right.*—MRS. MAE PIERCE, Allegan, Mich.

# Discounts on Garden Seeds to Gardeners and Other Large Buyers

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Read Instructions on Page One, and top of Price List in Catalog.  
Please Note Our Very Low Prices, even without these discounts.

Beans, Wax Podded, 15 lbs. or more.....	20%	Lettuce, 1 lb. or more .....	33 $\frac{1}{8}$ %
Beans, Green Podded, 15 lbs. or more.....	20%	Muskmelon, 1 lb. or more.....	20%
Beets, 2 lbs. or more .....	33 $\frac{1}{8}$ %	Mustard, 1 lb. or more.....	33 $\frac{1}{8}$ %
Mangels, 2 lbs. or more.....	33 $\frac{1}{8}$ %	Onion, 1 lb. or more .....	20%
Cabbage, 1 lb. or more.....	33 $\frac{1}{8}$ %	Parsnip, 1 lb. or more .....	33 $\frac{1}{8}$ %
Carrot, 1 lb. or more .....	33 $\frac{1}{8}$ %	Peas, 15 lbs. or more.....	20%
Cauliflower, $\frac{1}{4}$ lb. or more .....	20%	Pumpkin, 1 lb. or more.....	33 $\frac{1}{8}$ %
Celery, $\frac{1}{4}$ lb. or more.....	20%	Radish, 1 lb. or more .....	33 $\frac{1}{8}$ %
Corn, Sweet, 15 lbs. or more.....	20%	Salsify, 1 lb. or more.....	20%
Cucumber, 1 lb. or more.....	20%	Squash, 1 lb. or more.....	20%
Egg Plant, $\frac{1}{4}$ lb. or more.....	33 $\frac{1}{8}$ %	Tomato, 1 lb. or more.....	33 $\frac{1}{8}$ %

Discipline of Children

to Discipline and Control



## Price List of DePuy's Garden Seeds Spring 1921

### Please Read Carefully Before Making Your Order

We pay postage on **Packets, Ounces, Quarter Pounds, and Pounds ONLY**. Following prices include postage on all quantities up to and including **One Pound**. Larger quantities by Express or Freight as requested.

Add sufficient postage to cover extra weight of packing.

**FIELD SEED PRICES.** As markets are subject to changes, we issue each week during the active season, a Special Farm Seed Price List, quoting lowest possible current values, which will be mailed Free on request. Good Farmers will appreciate the quality of **Blue Bird Brand Seeds**, which are the **Best That Grow**.

ASPARAGUS SEED.	Pkt.	Oz.	¼ lb.	1 lb.
Bonvallet's Giant .....	\$0.05	\$0.10	\$0.25	\$0.90
Conover's Colossal .....	.05	.10	.25	.75
Columbian Mammoth White ..	.05	.10	.25	.75

BUSH BEANS—Wax Podded Varieties.	1 lb.	2 lb.	5 lb.
Hodson Wax .....	\$0.10	\$0.25	\$0.40
Currie's Rust Proof Black Wax ..	.10	.25	.40
Davis White Wax .....	.10	.30	.50
Golden Wax Improved .....	.10	.30	.50
Grenell's Golden Wax .....	.10	.25	.40
Keeny's Rustless .....	.10	.25	.40
Prolific Black Wax .....	.10	.25	.40
Wardwell's Kidney Wax .....	.10	.25	.40

BUSH BEANS—Green Podded Varieties.	1 lb.	2 lb.	5 lb.
Burpee's Stringless .....	.10	.30	.50
Black Valentine .....	.10	.25	.40
Giant Stringless .....	.10	.25	.40
Extra Early Refugee .....	.10	.25	.40
Late Refugee, 1000 to 1 .....	.10	.25	.40

POLE BEANS.	1 lb.	2 lb.	5 lb.
Kentucky Wonder .....	.10	.25	.40
Dutch Case Knife .....	.10	.30	.50
Lazy Wife .....	.10	.30	.50
Large White Lima .....	.10	.30	.50

DWARF LIMA BEANS.	1 lb.	2 lb.	5 lb.
Burpee's .....	.10	.40	.70
Henderson's .....	.10	.25	.40

BEETS.	Pkt.	Oz.	¼ lb.	1 lb.
Extra Early Eclipse .....	\$0.05	\$0.10	\$0.20	\$0.65
Early Turnip Bassano .....	.05	.10	.20	.65
Edmand's Early Blood Turnip ..	.05	.10	.20	.65
Improved Long Dark Red .....	.05	.10	.20	.65
Detroit Dark Red .....	.05	.10	.25	.90
Crosby's Egyptian .....	.05	.10	.25	.90

SWISS CHARD.	Pkt.	Oz.	¼ lb.	1 lb.
Silver Lyons .....	.05	.10	.20	.65

MANGELS AND SUGAR BEETS.	Pkt.	Oz.	¼ lb.	1 lb.
Mammoth Long Red .....	.05	.10	.20	.65
Golden Tankard .....	.05	.10	.20	.65
Giant Half-Sugar .....	.05	.10	.20	.65
Vilmorin's Improved Sugar .....	.05	.10	.20	.65

BROCCOLI.	Pkt.	Oz.	¼ lb.	1 lb.
Early White French .....	.10	.30	1.00	

BRUSSELS SPROUTS.	Pkt.	Oz.	¼ lb.	1 lb.
Improved .....	.10	.30	1.00	

CAULIFLOWER.	Pkt.	¼ oz.	Oz.	¼ lb.
Extra Early Dwarf Snowball .....	\$0.15	\$0.50	\$1.50	\$5.00
Extra Early Dwarf Erfurt .....	.15	.50	1.50	5.00
Dry Weather or Danish Giant ..	.15	.60	1.75	6.00
Autumn Giant .....	.10	.25	.75	2.50

CABBAGE—Highest Quality.	Pkt.	Oz.	¼ lb.	1 lb.
Extra Early Express .....	\$0.05	\$0.20	\$0.75	\$2.50
True Jersey Wakefield .....	.05	.20	.60	2.00
Early Large Wakefield .....	.05	.20	.60	2.00
Charleston Wakefield .....	.05	.20	.75	2.50
Copenhagen Market—Imported ..	.05	.20	.75	2.50
All Seasons .....	.05	.20	.60	2.00

### Cabbage—Continued.

	Pkt.	Oz.	¼ lb.	1 lb.
Early Danish Round Head—				
Imported .....	\$0.05	\$0.30	\$1.00	\$3.50
Allhead .....	.05	.20	.75	2.50
Early Winnigstadt .....	.05	.20	.60	2.00
Premium Late Flat Dutch .....	.05	.20	.75	2.50
Danish Ball Head—Imported .....	.05	.25	.75	2.75
Burpee's Sure Head .....	.05	.20	.75	2.50
Brill's Wonderful Red .....	.05	.30	1.00	3.75

### CARROTS.

Danver's Half Long .....	.05	.10	.25	.75
Long Orange .....	.05	.10	.25	.75
Guerande or Oxheart .....	.05	.10	.25	.75
Chantenay .....	.05	.10	.30	1.00
White Belgian Stock .....	.05	.10	.20	.60

### CELERY.

	Pkt.	¼ oz.	Oz.	¼ lb.
French-Grown Golden Self-				
Blanching .....	\$0.10	\$0.15	\$0.50	\$1.75
American-Grown Golden Self-				
Blanching .....	.05	.10	.30	1.00
White Plume .....	.05	.10	.20	.65
Soup or Cutting .....	.05		.10	.35
Giant Golden Heart .....	.05		.15	.50

### CORN, SWEET or SUGAR.

	Pkt.	1 lb.	2 lbs.	5 lbs.
Golden Bantam .....	.10	.25	.40	.90
Mammoth White Cory .....	.10	.25	.40	.90
Early Minnesota .....	.10	.25	.40	.90
Black Mexican .....	.10	.30	.50	1.10
Early Evergreen .....	.10	.25	.40	.90
Stowell's Evergreen .....	.10	.25	.40	.90
Country Gentleman .....	.10	.25	.40	.90

### CUCUMBERS.

	Pkt.	Oz.	¼ lb.	1 lb.
Davis Perfect .....	\$0.05	\$0.10	\$0.40	\$1.50
Boston Pickling .....	.05	.10	.25	.90
Chicago or Westerfield Pickling ..	.05	.10	.25	.90
Jersey Pickling .....	.05	.10	.25	.90
Early Cluster .....	.05	.10	.25	.90
Klondike .....	.05	.10	.30	1.00
Improved Long Green .....	.05	.10	.40	1.50
Evergreen White Spine .....	.05	.10	.40	1.50
Arlington White Spine .....	.05	.10	.35	1.25
Early Frame .....	.05	.10	.35	1.25
Lemon .....	.05	.15	.50	1.75

### EGG PLANT.

	Pkt.	¼ oz.	Oz.	¼ lb.
New York Improved .....	\$0.10	\$0.15	\$0.40	\$1.50
Black Beauty .....	.10	.15	.40	1.35

### ENDIVE.

	Pkt.	Oz.	¼ lb.	1 lb.
Broad Leaved .....	\$0.05	\$0.10	\$0.30	\$1.00
Green Curled .....	.05	.10	.30	1.00

### DANDELION.

French Thick Leaved .....	.10	.40	1.50	
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### DILL.

	.05	.15	.45	
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### KOHL RABI.

	Pkt.	Oz.	¼ lb.	1 lb.
Early White Vienna .....	\$0.10	\$0.15	\$0.50	\$1.75
Early Purple Vienna .....	.10	.20	.60	2.00

### LEEK.

American Flag .....	.05	.15	.50	1.75
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## PRICE LIST—Continued

LETTUCE.	Pkt.	Oz.	¼ lb.	1 lb.
Big Boston	\$0.05	\$0.10	\$0.35	\$1.10
California Cream	.05	.15	.50	1.75
Hanson	.05	.10	.35	1.10
May King	.05	.10	.35	1.10
Salamander	.05	.10	.35	1.00
Denver Market	.05	.10	.35	1.10
New York or Wonderful	.05	.15	.50	1.75
Cos or Romaine	.05	.10	.30	1.00
Black Seeded Simpson	.05	.10	.35	1.00
Grand Rapids	.05	.10	.35	1.10

### MUSKMELONS.

Honey Dew	.10	.15	.50	1.60
Baltimore or Acme	.05	.10	.35	1.25
Rocky Ford	.05	.10	.35	1.25
Banana	.05	.15	.50	1.60
Delicious	.05	.15	.50	1.75
Nutmeg	.05	.10	.35	1.25
Hackensack	.05	.10	.35	1.25
Emerald Gem	.05	.10	.35	1.25
Hoodoo	.05	.10	.35	1.25
Osage or Miller's Cream	.05	.15	.50	1.75
Tip Top	.05	.10	.35	1.25

### WATERMELONS.

Alabama Sweet	.05	.10	.25	.75
Rattlesnake	.05	.10	.25	.75
Kolb's Gem	.05	.10	.25	.75
Kleckley's Sweet	.05	.10	.25	.75
Peerless or Ice Cream	.05	.10	.25	.75
Sweetheart	.05	.10	.25	.75
Halbert's Honey	.05	.10	.25	.75
Tom Watson	.05	.10	.25	.75

### CITRON.

Red Seeded	.05	.10	.25	.75
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### MUSTARD.

Southern Giant	.05	.10	.20	.75
Ostrich Plum	.05	.10	.20	.75

### PEA NUTS.

	Pkt.	1 lb.	2 lbs.	5 lbs.
Virginia Bush	\$0.10	\$0.40	\$0.60	\$1.25
Virginia Running	.10	.40	.60	1.25

### ONIONS.

	Pkt.	Oz.	¼ lb.	1 lb.
Australian Brown	\$0.05	\$0.15	\$0.50	\$1.75
Red Wethersfield	.05	.15	.50	1.75
Extra Early Russet	.05	.20	.55	1.95
White Portugal	.05	.20	.60	2.25
Prizetaker	.05	.20	.55	1.95
Yellow Globe Danver	.05	.15	.50	1.75
Michigan Yellow Globe	.05	.20	.60	2.15
Ohio Yellow Globe	.05	.20	.60	2.25
Southport White Globe	.05	.20	.60	2.25
Southport Red Globe	.05	.20	.60	2.00
Southport Yellow Globe	.05	.20	.60	2.25

### ONION SETS.

	1 lb.	2 lbs.	5 lbs.
White Bottom	\$0.25	\$0.40	\$0.90
Yellow Bottom	.25	.40	.90
Red Bottom	.25	.40	.90
Yellow Multiplier	.25	.40	.90
Egyptian or Evergreen	.20	.35	.80

### PARSLEY.

	Pkt.	Oz.	¼ lb.	1 lb.
Moss Curled	\$0.05	\$0.10	.025	\$0.75
Hamburg	.05	.10	.25	.75

### PARSNIPS.

Hollow Crown	.05	.10	.25	.80
Improved Guernsey	.05	.10	.25	.80

### PEPPERS.

Perfection Pimento	.10	.40	1.50	
Spanish Jumbo	.10	.25	.90	
Large Bell or Bull Nose	.05	.25	.90	
Chinese Giant	.10	.40	1.50	

### PUMPKIN.

Mammoth Golden Cushaw	.05	.10	.25	.75
Japanese Pie	.05	.10	.25	.90
Connecticut Field	.05	.10	.20	.75

### PEAS.

	Pkt.	1 lb.	2 lbs.	5 lbs.
Ex. Early Pedigree	\$0.10	\$0.25	\$0.40	\$0.90
Alaska	.10	.20	.35	.80
Thomas Laxton	.10	.35	.60	1.25
American Wonder	.10	.30	.50	1.10

### PEAS—Continued.

	Pkt.	1 lb.	2 lbs.	5 lbs.
Sutton's Excelsior	\$0.10	\$0.30	\$0.50	\$1.10
Gradus	.10	.35	.60	1.40
Little Marvel	.10	.30	.50	1.10
Premium Gem	.10	.30	.50	1.10
The Admiral	.10	.25	.40	.90
Telephone	.10	.35	.60	1.40
Bliss' Everbearing	.10	.30	.50	1.10
Horsford's Market	.10	.25	.40	.90
Starlagem	.10	.30	.50	1.10
Blackeye Marrowfat	.10	.25	.40	.90
Whiteeye Marrowfat	.10	.25	.40	.90
Champion of England	.10	.30	.50	1.10

### FIELD PEAS—See Special Farm List.

### RADISH.

	Pkt.	Oz.	¼ lb.	1 lb.
Early Scarlet Globe	\$0.05	\$0.10	\$0.25	\$0.90
Early Scarlet Turnip	.05	.10	.25	.90
Iceicle	.05	.10	.20	.75
French Breakfast	.05	.10	.30	1.00
Long Scarlet	.05	.10	.25	.90
Cincinnati Market	.05	.10	.20	.75
Crimson Giant	.05	.10	.30	1.00
Improved Chartier	.05	.10	.20	.75

### Winter Varieties.

Chinese Rose	.05	.10	.25	.90
Chinese White	.05	.10	.25	.90
Long Black Spanish	.05	.10	.25	.90

### RHUBARB.

Victoria	.05	.15	.50	1.75
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### SPINACH.

Giant Thick Leaf	.05	.10	.15	.40
Prickley Winter	.05	.10	.15	.40
Bloomsdale	.05	.10	.15	.40

### SALSIFY.

Mammoth Sandwich Island	.10	.15	.50	1.75
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### SQUASH.

Early Yellow Bush	.05	.10	.35	1.35
Mammoth White Bush	.05	.10	.35	1.25
Early White Bush	.05	.10	.35	1.25
Mammoth Summer Crookneck	.05	.10	.35	1.25
Delicious	.05	.15	.50	1.75
Red Hubbard	.05	.15	.40	1.50
Green Hubbard	.05	.15	.40	1.50

### POTATOES—See Special Farm List.

### TOMATOES.

Crimson Beauty	.10	1.00	3.75	
Earliana	.05	.20	.75	
John Baer	.05	.35	1.00	
Matchless	.05	.20	.65	
Acme	.05	.20	.65	
Early Detroit	.05	.25	.85	
New Stone	.05	.25	.75	
Beauty	.05	.25	.75	
Ponderosa	.05	.30	1.00	
Truckers Favorite	.05	.30	1.00	
Golden Queen	.05	.25	.80	
Yellow Plum	.05	.25	.80	

### TOBACCO.

Comstock's Spanish	.10	.30	1.00	
Connecticut Seed	.10	.30	1.00	
General Grant	.10	.40	1.25	
Big Havana	.10	.30	1.00	
Sweet Orinoco	.10	.30	1.00	
Slate's Improved White Burley	.10	.40	1.25	
Our Mixture	.10	.30	1.00	

### TURNIPS.

	¼ lb.	1 lb.	2 lbs.	5 lbs.
Purple Top White Globe	\$0.15	\$0.50	\$0.85	\$2.00
Purple Top Strap Leaf	.15	.40	.75	1.75
White Egg	.15	.50	.85	2.00
Orange Jelly	.15	.50	.85	2.00
Early White Flat Dutch	.15	.50	.85	2.00
Cow Horn Long White	.20	.70	1.25	3.00

### RUTABAGA.

Sweet Russian	.15	.40	.70	1.50
Am. Purple Top	.15	.40	.70	1.50

### SUNFLOWER—See Special Farm List.

	Pkt.	Oz.	¼ lb.
SAGE	\$0.10	\$0.50	\$1.75



## FARM SEEDS

For five years conditions have combined to restrict seed production. First, the world war which was the cause of non-production in several of the European countries, also enforcement of embargoes and blockades, deprived this country of supplies from those sources, with more serious consequences than many people are aware. In the case of clover seed for example, this country for years, had taken an average of over 200,000 bushels from Europe annually, but the years 1917 and 1918, scarcely a bushel came over, while for many other seeds we were almost entirely dependent on different European countries prior to the war. Since then American growers have made great progress, but it will require several years to make us self sustaining, even if this is possible. To add to the difficulties, for two years weather conditions have

been unfavorable in this country for many of the seed crops, notably, the clovers, timothy, alfalfa and many of the garden seeds.

With present limited supplies throughout the world, and the fact that it will take several years to accumulate normal stocks, it is plain that growers are insured good prices in the future, which should be an incentive to liberal planting. Regardless of the cost of seed now, a favorable season would mean big profits, no matter how large the crop.

Realizing the situation, we have put forth greater efforts to secure supplies, giving first attention to quality and by the installation of several thousand dollars worth of new machinery, we are better prepared to serve our customers than ever before.

## SEEDS THAT WE SPECIALIZE IN

Quality is important in all seeds, but there are some in which impurities are more likely to be found than in others. Again, there are seeds that require favorable growing conditions for maturing, to insure good germination. In all these cases we exercise the utmost care in selecting and handling the best grades, to insure the highest purity and germination.

**RED CLOVER**—Both medium and mammoth. Of all farm seeds, none are more liable to contain noxious impurities, or so much waste as these. At present high prices it requires only about two pounds of dirt, weeds or other waste to add a dollar per bushel to the cost. Two pounds is hardly noticeable, but shows the importance of thorough cleaning and this can be done only with expensive equipment and electric power to insure absolutely steady operation. We believe anyone who has ever bought Blue Bird Brand Clover Seed will agree that it was the cleanest, purest and best seed he ever used. See page 27.

**ALSIKE**—What we have said about red clover, applies with even greater force to Alsike. Illustrating this, one of our farmer customers not long since, wanted us to clean his crop for him, so that he would have good seed for his own use and for some of his neighbors. Upon examination we discovered that it was loaded with one of the most objectionable weeds that alsike is subject to. By putting it under a strong magnifying glass, he was quickly convinced that he did not want to use it himself, neither could we use it. Analysis showed it to contain 19 percent of weeds and 10 percent of other impurities. This man was sincere in thinking he had good seed, because he raised it himself. Blue Bird Brand Alsike is selected, graded and cleaned by experts and is the best that money and skill can produce. See page 28.

### SPECIAL NOTICE

We prefer in all cases where it is possible, to have customers purchase our seeds of their home dealers, but where there is no dealer handling them, or will not supply you, we will be glad to send samples and our Special Farm Seed Price List.

Look for the BLUE BIRD BRAND on bags and thus be sure you are getting the best seed that grows.

**ALFALFA**—We speak advisedly, when we say that Blue Bird Brand Northwestern dry land Alfalfa Seed is the best to be obtained and hundreds of good farmers support us in this claim. Adapted to all the requirements of a cold climate and moderate rain-fall. See pages 25-26.

**SWEET CLOVER**—This is a crop that in a few years will equal or surpass red clover in importance. We began urging the planting of the White Blossom variety before hardly any other seedsmen in the country noticed it. Our early advice has been more than justified by experience and we claim credit for being largely responsible for making Michigan the foremost Northern State in the production of this wonderful crop.

Michigan seed is the best and we specialize in it, claiming for Blue Bird Brand, the best Sweet Clover Seed in the world. See page 29.

**SUDAN GRASS**—Is gradually gaining prominence as one of the best forage crops grown and we predict that in a few years every Northern farmer will be growing it. We have never been able to furnish seed before that was grown further north than Kansas, but this year we offer a very choice article grown in the extreme northern part of Indiana. The demand for Sudan Grass seed was so great last spring that supplies were entirely exhausted before planting was finished and many farmers were unable to get it. Every farm should have a field of Sudan Grass. See page 32.

**OTHER SEEDS**—If space permitted, we might make special mention of many other seeds which, by careful attention to selection and preparation, we claim to have a little better than any other seed house offers. This is not a random statement, for we are willing to put Blue Bird Brand seeds up with any others for comparison and let experts be the judge.



## Lawn Grass Seed

To typify the Blue Bird as a symbol of purity and happiness, we furnish under our BLUE BIRD BRAND, a quality of lawn grass seed that insures "The Grass That Is Pure" and "Happiness," in beautiful surroundings.

A smooth, velvety lawn surrounding a house adds not only to the value, but enhances the enjoyment of every home, whether it be in the city, town or country. When properly made, a lawn is as satisfactory as any investment a home owner can make.

A lawn may be made in two ways, by sodding or by sowing seed. Sodding is not only very expensive, but unsatisfactory as well. Sods are ordinarily taken from a pasture or along the roadside and almost invariably contain weed seeds and coarse, tufty grasses which make their appearance after the lawn is made. Seeding is not only more economical but is attended with better results.

The most important thing to consider in selecting seed for lawn grass is to obtain a proper mixture of several varieties, for two reasons. First, each variety is at its best during a certain part of the season. By properly choosing early, medium and late grasses, a smooth, even, green lawn is assured from early spring to late autumn. Second, a given area can support only so many grass plants of one kind for they all absorb the same sort of food, but if several varieties are sown, the same area will support many more plants, as different sorts live on various elements in the soil. This will give a much thicker and more luxuriant turf all over the lawn.

With these facts in mind our Blue Bird Lawn Grass Seed is scientifically combined. Our experience of many years has given us an intimate knowledge of grasses, their habits and requirements. In our Blue Bird Seed are included the best varieties—pure, clean and free from foul seed.

Many people are under the impression that there is danger in getting weed seeds in lawn mixtures; this impression has no doubt been formed because it is a common practice to top grade off with rich dirt taken from some location that has not been under cultivation, hence contains the seeds that are common to that locality. When such soil is used it should be cultivated long enough to free it from such seeds, then sow a reliable lawn mixture, when better results will be obtained than by sodding, and at much less expense. We pay particular attention to lawn grasses and are prepared to furnish mixtures for any situation or condition. Our regular brands are made from the finest seeds to be obtained.

From early spring until late in the fall, lawns sown with our Lawn Seed remain green and fresh, for the reason, that this mixture includes quick growing varieties which are at their best soon after the frost is out of the ground, others that mature and flourish in midsummer, and still others that are greenest and sturdiest in autumn. For each of these seasons there are several different varieties living on different elements in the soil, so that one is certain always to have a satisfactory carpet of green wherever Blue Bird Lawn Seed is sown.

Our Lawn Seed is used on golf courses, tennis courts, croquet lawns, athletic fields, in parks, cemeteries and private grounds with unvarying success. A brand of lawn grass seed such as our Blue Bird which gives perfect satisfaction for these requirements is bound to insure a fine, beautiful, velvety turf around any well cared for residence.

Not only is Blue Bird Lawn Seed suitable for making new lawns, but it is equally valuable for quickly renewing old, worn-out areas.

Our Booklet On Lawns tells how to build new lawns, how to repair old lawns, and how to keep lawns green. We will mail one of these booklets free to anyone on request, or it will be sent with every order for Lawn Grass Seed, without extra charge. Blue Bird Lawn Seed is free from chaff, being especially re-cleaned, and therefore less bulky than seed not so well prepared. A pound of Blue Bird Lawn Seed will cover a much larger area than will a pound of the cheaper mixtures. In making a new lawn one pound of Blue Bird Lawn Seed will sow 350 square feet.

1 lb., 50c, postpaid: Not prepaid: 1 lb., 40c; 5 lbs., \$1.85; 10 lbs., \$3.50.

### Shady Place Mixture

On almost every lawn there are shady places where difficulty is experienced in getting grass to grow. These bare spots are very unsightly and disfigure the lawn. In such places proper seeding may be all that is required. In this mixture we have combined fine, dwarf growing, evergreen varieties which do well in sheltered or shaded spots. Some varieties of grass require more sun than others, therefore if the kinds which need the least sun are selected, those sorts when sown in shady places will thrive and make a good appearance. Frequently a shady lawn, which is at the same time insufficiently drained, becomes affected with moss and coarse, boggy grasses. In such cases an application of slacked lime at the rate of forty to fifty pounds to each thousand square feet is an excellent remedy; but the moss should be first removed with a sharp rake. When this is done, sow Blue Bird Shady Place Lawn Mixture, which will bring greenness to the bare spots and restore the beauty to your lawn. Of course, very densely shaded places are quite hopeless and no variety of grass can be made to flourish under such conditions. 1 lb., 50c, postpaid. Not prepaid: 1 lb., 40c; 5 lbs., \$1.85; 10 lbs., \$3.50.

### Blue Bird Terrace Mixture

The secret of fine sward for terraces lies in obtaining grasses which root deeply and spread so as to make a heavy mat of sod. To keep such sod in first-class condition, the grass should not be cut too often nor too closely. Give it a chance to grow strong and tough. Let the food which the grass blades get from the air, dew and rain, work down to strengthen the roots. This mixture is best suited for growing on terraces, embankments and hillides, preventing heavy rains from washing them out, and withstanding drought and exposure; produces at the same time a velvety, luxuriant turf of especially fine appearance. 1 lb., 50c, postpaid. Not prepaid: 1 lb., 40c; 5 lbs., \$1.85; 10 lbs., \$3.50.



Alfalfa Field.

## Alfalfa

### RULES FOR SUCCESS

**1. Plant in deep, loose, friable soil.** If the soil is shallow the Alfalfa plant cannot utilize its deep-feeding root system and is likely to be choked out by surface-feeding weeds. The roots can, however, penetrate rather stiff, clay soils and sometimes go through hard-pan. Soils that are light on account of being sandy usually lack fertility, but this can often be corrected by the free use of manure. Good fields are sometimes found on heavy clay soils.

The seed bed should be fine on top, but well settled. It usually requires six weeks for plowed land to settle enough for seeding. The land should be disked and harrowed right after plowing. Then work it every ten days or two weeks until the seed is sown; this will insure sufficient moisture for germination. When late seeding is practiced, begin to cultivate as soon as the preceding crop is removed.

For some soils disking is sufficient. This is of course less expensive than plowing and it does not take so much time for disked land to settle as it does for the plowed land. The preparation must be uniformly good, as the poorly prepared spots are sure to fail and become weed centers later. Summer fallowing is often practiced to conserve moisture for germination of seed at planting time and destroy weeds.

For sandy ground apply a light top dressing of straw or coarse manure just before seeding to prevent the soil from drifting, or sow the Alfalfa in a thin stand of small grain, such as barley.

**2. The soil must be well drained.** Alfalfa does not thrive where the water table is within six feet of the surface.

The land must be well drained, either naturally or by the use of tile or open ditches. Fine results have been obtained on drained bottom land. Land slightly rolling or nearly level and well drained is usually considered the best. Alfalfa is often killed by overflow from streams. During the growing period it will not usually stand more than twenty-four hours of complete submergence or forty-eight of partial overflow.

When sown on land with dry sub-soil, the roots penetrate for a few inches through the moist top soil and then reach the dry, hard sub-soil located perhaps at the bottom of the furrow slice. Being unable to penetrate this dry soil, the roots stop growing or run horizontally in the bottom of the furrow, thus forming only a shallow root system. To prevent this condition, either plow in the Autumn or else wait six weeks for the ground to settle before planting Alfalfa in the spring.

**3. Inoculation is necessary.** Inoculation means putting or planting in the soil, nitrogen-fixing germs of bacteria without which the Alfalfa cannot flourish. Where Sweet Clover grows wild, in the field or along the roadside, artificial inoculation for Alfalfa may not be necessary as the same germs grow on the Sweet Clover as on Alfalfa and natural inoculation takes place. But there is no other plant which commonly grows wild in the North that can support the same germs as the Alfalfa. All the legumes including clover, beans and peas bear bacteria but a special kind lives on each plant.

These germs on the Alfalfa roots form nodules from the size of a pin head to a pea.

There are several methods of inoculating Alfalfa seed but we recommend the use of Edward's Legume Bacteria. This is one of the most reliable cultures ever offered, being a nitrogen fixing bacteria prepared for the inoculation of all legume crops, and our prices are much lower than other seedsmen ask for similar preparations. Soil taken from Sweet Clover patches and mixed with the seed before sowing or scattered over the field affords satisfactory inoculation and a great many have been successful by sowing sweet clover seed mixed with alfalfa seed in proportion of 3 lbs. of sweet clover to 12 or 15 lbs. of alfalfa. This requires the least trouble and is said to be effective. Sweet clover adapts itself to almost any kind of soil and being a biennial, it runs out in 2 years, leaving large roots in the ground to fertilize and furnish the necessary supply of nitrogen for alfalfa, or clover. Probably the surest method of inoculation is to sow the field to sweet clover, which for the two years that it lasts will afford two or three good hay crops and is then plowed under, putting the land in the best of shape for either alfalfa or clover. No better treatment is possible for light or worn out soils.

Another form of preparation is to sow a few pounds of Alfalfa seed on the field two or three years before it is intended to seed a regular Alfalfa crop, putting it in with grain, clover or any other seed used. If this is undesirable it often pays to plant a small amount of Alfalfa six months to a year before the regular crop. Probably the seed carries a few germs, and in time these plants will often develop nodules.



## ALFALFA—Continued

4. **Use Lime for soil acidity.** Alfalfa will not grow where the soil is acid. This is often the case where corn and wheat have been raised for many years. A simple test for acidity is to make a deep cut in the ground with a knife, pressing the earth slightly apart, then push a piece of blue litmus paper (procureable at any drug store) into the opening, press the earth together and leave it for several hours. If the paper turns from blue to red it is proof of acidity. This test should be tried in several parts of the field.

Lime is the principal material needed to sweeten acid soils. It is also as necessary for plant growth as nitrogen or phosphorus. If ground limestone is applied, it should be very finely ground and spread at the rate of 1500 to 3000 pounds per acre.

Lime is to be applied after plowing and thoroughly disked in, preferably some weeks in advance of seeding. It may be spread from a wagon with a shovel, or with a manure spreader or broadcast grain seeder. There is little danger of using too much lime.

5. **The land must be free from weeds.** Young Alfalfa plants are very tender and are likely to be killed by weeds during their early stages of growth. On this account the land should be as free from weeds as possible. Raising a cultivated crop or a crop like clover, which naturally prevents weed growth, will help to check weeds. If a weedy soil must be used, plow the land several months before seeding the Alfalfa and destroy the weeds as they appear by frequent harrowings.

6. **Selection of seed is most important.** Poor seed is a primary and great cause of a poor stand. In buying Alfalfa Seed the highest priced seed is often the cheapest. The loss is much greater in using seed of poor quality, than the difference in cost of the seed. This loss comes from the labor thrown away, the stands lost and yields sacrificed by its use, as well as the final expense in getting rid of the weed seeds introduced.

If seed germinates poorly, one must either plant more seed or expect a thin stand. Small, shrunken seed will not produce vigorous plants. Weedy seed means the introduction into the field of plantain, dodder, thistle, mustard or some other pest, ready to take advantage of the fine fertile soil and undo the work of two years' preparation.

Our **Blue Bird Brand Alfalfa** is the cream of all North-western seed and represents only the choicest crops, beautiful color, plump and clean, with a purity test of 99.5 per cent or better. After buying, the seed is shipped to Pontiac, where it is graded up and recleaned by use of the best machinery made. Some lots that we get, while not having all the scoring points that we require for Blue Bird Brand, are very handsome seed, showing high germination and purity with all the other characteristics of high grade seed and much better than is usually sold for "our best seed," "American grown," etc., but which we sell at a less price than Blue Bird. It will, therefore, pay to get samples from us before buying.

7. **Sow the seed so it will be covered.** Alfalfa seed must be covered, not sown on the surface, as is sometimes done with grasses and clovers. It may be planted with drill or seeded broadcast by hand, hand seeder or wheel barrow seeder. It is advisable to sow half the seed one way across the field and the other half at right angles to secure an even distribution.

Depth of planting depends upon the soil. Covering three-quarters to one inch deep is usually sufficient on clay soils, but one and one-half inch deep is required on sandy soil, or in the semi-arid sections. When sown broadcast, a light harrow, weeder or brush is used to cover seed.

8. **Use plenty of seed.** For the Central and Eastern States ten to twelve pounds per acre is the usual amount and this may be increased to twenty pounds if it is necessary for the Alfalfa to cover the ground from the start, to prevent weeds from becoming established. The quantity to sow will also depend upon the condition of the soil as to moisture, the weather conditions and seeding method employed. With land prepared by sowing a few pounds of seed six months to a year preceding, with a heavy application of stable manure plowed under six months before, perfect soil preparation, normal moisture, clean seed of high germination—10 pounds of seed per acre should be sufficient.

9. **Using a nurse crop often advisable.** Weeds are likely to prove troublesome for spring seeded Alfalfa unless the ground is clean from previous cultivation. A nurse crop helps to check the weeds until the Alfalfa seed starts. The nurse crop takes some of the moisture and plant food from the Alfalfa and shades it. But it gives the advantage of planting the Alfalfa with little additional expense, except the cost of seed. Moreover by this method it is not necessary to give up the use of the land for a whole season to get the Alfalfa established.

Barley, wheat or rye are better for a nurse crop than oats. Oats require more water and give too much shade. Do not sow Alfalfa seed with the grain, but plant each

separately. Reduce from one-third to one-half the regular rate of grain seeding when using it for a nurse crop.

**Characteristics.** One of the most important characteristics of Alfalfa is the long tap root, frequently extending fifteen or more feet into the soil. Unlike most farm crops Alfalfa makes nearly all of its growth below the ground the first season. The deep growing roots penetrate the sub-soils and bring to the top soil the phosphorus and potash stored below, making them available as plant food for the succeeding crop. After the great roots decay they form passages for air and water, besides leaving openings for the roots of the next crop.

As a soil builder, the Iowa Experiment Station claims that an acre of Alfalfa adds over twice as much nitrogen to the land as the average acre of Red Clover. Nitrogen is the most important element in the soil and the one most likely to give out. Alfalfa does not ask the farmer for nitrogen because it gets its nitrogen from the atmosphere.

Few general rules can be laid down for Alfalfa culture since different conditions require different methods. One must study the requirements of the plant and treat his land to meet these needs.

In order to find out in the shortest time what treatment any particular land needs, whenever doubt exists, it is well to plant quarter acre test plots, using lime on one plot, a liberal dressing of manure and lime on another, manure without lime on a third; no lime and no manure on the fourth, as a check on the first three. The method giving best results can be applied to a large acreage the succeeding season.

Where the preparation of the soil and time of seeding are important factors, the experiments can be made along these lines.

## Grimm Alfalfa

Many years ago a man named Grimm came from Germany and settled near Minneapolis. He brought with him seed of an Alfalfa, which according to neighborhood statement, he called Norwegian Alfalfa. It became known, however, as Grimm's Alfalfa and obtained a more than local reputation on account of its productiveness and extra hardiness, for it survived winters that killed out many fields of other varieties of Alfalfa. Of course this was before the Montana, Dakota or any other northern grown Alfalfa seed was procurable.

Small patches of Grimm Alfalfa are grown in the Black Hills of South Dakota, among the mountains of Montana, Idaho and Oregon. From some of these we secure limited amounts of fine Grimm Alfalfa seed.

## Facts About Alfalfa

"There is no state in the Union in which Alfalfa cannot be successfully grown."

Alfalfa is more valuable than clover in many sections of the country, since wherever it flourishes it yields more per acre and is worth far more as a feed. Alfalfa produces from 3 to 7 tons of hay to the acre. It has as much protein as Wheat bran.

360 stalks have been grown from one seed.

It doesn't exhaust the soil, it enriches the soil.

It will grow 3 to 5 crops a year.

Alfalfa in money value is worth 45 per cent more than other Clovers and 60 per cent more than Timothy.

Ten milch cows can be fed on less than 2 acres by soiling.

One acre will pasture 20 pigs for 6 months.

Three pounds a day makes a full feed for fattening lambs.

Four to five pounds makes a full feed for fattening sheep.

Thirty-five pounds makes full feed for fattening steers.

Sheep fed on Alfalfa will gain from 8 to 15 pounds in 75 days and will double with small grain ration added.

Lambs wintered on Alfalfa will produce one to two pounds more of wool than when on the ranch.

Fed to dairy cows Alfalfa maintains the flow of milk equal to June Grass. It can be chopped fine with corn meal. Such a mixture is worth more a pound than the original corn meal.

Many interesting facts in addition to the above might be cited about Alfalfa. It would hardly be possible to say too much about Alfalfa, it is a working plant which is changing the destiny of many farming sections.

"Its long, branching roots penetrate far down, push and crowd the earth this way and that, and thus constitute a gigantic subsoiler. These become an immense magazine of fertility. When they decay they liberate a vast reservoir of fertilizing matter below the plow, to be drawn upon by other crops for years to come."

# Clover Seed

Of all the crops grown on the farm, clover is without doubt the most important; not only because of its market value and importance as a forage crop, but its great value as a fertilizing agent. Without it, immense sums would have to be expended annually for commercial fertilizers, and even then the benefits would not be as great as those obtained from clover. Many farmers hesitate using this valuable seed as freely as they should, fearing they may not secure a catch, or on account of the cost, which they appear to regard as an expense rather than an investment returning them profits in many ways.

When the many benefits derived from clover are considered, it must be plain to any farmer that he cannot afford to economize too much in its use. As a forage plant some one of the different varieties is adapted to every section of the country, and taken altogether there can be no doubt that the clovers are the most valuable of all forage crops. By using good seed, the grower is most likely to derive a benefit first from the hay crop then the seed crop, and greatest of all, the upbuilding and maintenance of his lands. Show us a farm where clover has been grown freely and we will show you a money making owner.

No department of our seed business receives more painstaking attention than that given to clover seed, and it constitutes a large percentage of our entire seed business; in fact we specialize in these seeds and feel safe in saying that no house in the country can offer better values, either as regards quality or price.

**COMMERCIAL FERTILIZERS WITHOUT POTASH.**—The European War has shut off our supply of potash, therefore the value of commercial Fertilizers for many farms is of doubtful value. Clover, however, is always the same and there is no land that is not benefited by its use.

## Red Clover

**MEDIUM, or RED JUNE** is the variety most generally grown. It succeeds on a great variety of soils, but those best adapted are deep, well drained clay loams and limestone soils. Moist, sandy loams, well supplied with humus are also well adapted to red clover, but it will not succeed well on dry sandy, or porous gravelly soils. Unlike alsike clover, it does not do well on wet, soggy or peaty soil. As a soil improver, in general farming, red clover is without an equal. Besides yielding 1 to 2 tons of hay to the acre, it leaves a large amount of residue in the form of vegetable matter in the soil. Plowed under green, it furnishes the soil with a great amount of nitrogen, which it derives largely from the air, and in this respect is one of the most valuable of all fertilizers.

Medium clover should, when wanted for hay, be cut when the heads are just coming into bloom. The second crop is the one that produces most seed. If not wanted for hay, it may be pastured till about the first of June, then allowed to seed.

Seeding is usually done in the spring on fall grain crops. Some still prefer sowing in early spring when the ground is checked from the action of frost, but of late years, seeding with spring grain crops has become more common. When sown alone, 7 to 12 pounds of seed are required per acre, but when sown with timothy about 6 pounds per acre is sufficient.

## What Is The Best Clover Seed?

It is conceded that under normal conditions, the best clover seed for northern latitudes, is produced in Michigan and Wisconsin, but this does not mean that all the seed from either state is the best. On the contrary, much of it is very inferior. The quality varies with the season, and different fields in the same locality vary greatly.

Our conception of what constitutes the best clover seed, is either Michigan or Wisconsin grown, (according to the season)—purity not below 99.5 per cent—a minimum of brown, dead or shrunken seed—good color and germination above 90 per cent. To meet these requirements, even the best crops must be thoroughly cleaned and tested, as they fall far short of these specifications, without the treatment which only a well equipped cleaning plant and experienced operators can supply. Direct exchange from grower to grower is very uncertain and promotes foul fields, as shown by the case cited under "Alsike", page 23.

A conscientious effort is made to have every pound of BLUE BIRD BRAND Clover Seed meet above requirements, but not more than 25 per cent of the crop can be made to reach this standard.



Medium Red Clover.

## Genuine Mammoth Red Clover

Sometimes called Bull, Large English, Sapling, Giant, and Soiling Clover. This variety grows coarse, and while not as suitable for hay as the Medium, is more valuable as a fertilizer. It matures but one crop a year, and is more sure to afford a seed crop. When grown for this purpose, it should be pastured till the first of June, or it may be clipped at about that time with a mower.

For restoring land or for general fertilization, there is nothing more valuable than Mammoth Clover. It yields a large growth and when turned under will loosen and improve the working of heavy clay soils better than any other crop.

As it is impossible to distinguish the seed of Mammoth from Medium, the seedsman must take the word of the grower or dealer from whom he buys. We therefore handle only such lots as can be obtained from the most reliable sources and take great care to keep the two separate. In the large markets the two are handled together, no particular pains being taken to distinguish between them, hence dealers who draw their supplies from such sources are never very certain as to what they are offering.

The use of Mammoth Clover has increased very rapidly the past few years, many farmers finding it a most profitable crop to grow for seed, while for the purpose of restoring depleted soils or enriching poor land, there is probably no crop that will show better results. We take the same care in making our selections of Mammoth that we do in securing the best grades of Medium, and we offer the choicest of the crop under our Blue Bird Brand. We also furnish other grades, under other brands and at different prices.

## White Clover

White or Dutch Clover is a perennial of a creeping nature and is used mostly in lawn mixtures, although it is a valuable addition to pasture mixtures, using 1 to 3 lbs. per acre. Adapted to low meadows where not too wet.

On lands suited to its growth it will last indefinitely, though may be crowded out by the grasses certain seasons, only to reappear the next season. Invaluable in lawn mixtures, imparting a dark, rich green to the lawn, and holding its color with the grasses till after freezing. 1 lb., 80c, postpaid. Ask for Special Farm Seed List.

## Alsike Clover

Alsike is a perennial, intermediate in size between Red and White Clover. The fragrant blossoms are of a pinkish color and furnish large quantities of honey, it being often sown by bee-keepers for that purpose. It succeeds well in moist, low lands and on heavy clay soils; in fact, may be grown in any section where clover thrives, and on a class of soils that are not so well adapted to red clover.

**Hay**—When well cured, there is no hay more greatly relished by stock of all kinds. Mixed with timothy, it affords one of the best forage rations and the two are grown very successfully together, the hay from such a mixture being better than either of them alone. In the Northern States a favorite mixture is 4 pounds of Alsike and 8 pounds of timothy per acre. In the more Southern States, 10 pounds of Orchard Grass, 5 pounds Perennial Grass, 3 pounds Red Top and 4 pounds Alsike per acre is a common mixture.

Alsike is harder than either Mammoth or Medium clover, but lodges more than either, hence the advantage of seeding with some of the grasses.

When sown alone for seed or hay, from 5 to 8 pounds per acre are required.

Michigan is noted for its fine Alsike, and the best seed in the country comes from this state. Our facilities for securing fine quality are the best, as we are located in the heart of the seed district.

**Seed**—OUR BLUE BIRD BRAND is made from the best lots we can obtain and is a strictly fancy article of high purity and germination.

We are willing to let you be the judge and ask that you compare this brand with any other Alsike Seed you can find. If it is not the cleanest, best matured and purest of all the samples you get, we will not ask for your order. A request will bring sample.

1 lb., 65c, postpaid. Ask for our Special Farm Seed Price List.

## Permanent Pasture Mixtures

These are combinations of grasses, clover, alfalfa, and sweet clover. As the clover "runs out," the perennial grasses and alfalfa are becoming established, making an all-season pasture. In case of low, undrained soil, the alfalfa will not succeed, but the mixture is intended to be as near suitable for all kinds of soil as possible. It being difficult to separate some of these seeds, they are carefully recleaned and sold at a lower price than would be possible if offered separately.

### For High, Dry Land

This mixture contains timothy, red top, Italian rye grass, orchard grass, Kentucky blue grass, alfalfa and sweet clover. We have sold this mixture several years, with great satisfaction to our customers and believe no other combination so desirable for the purpose, as there is one or more grasses that will adapt themselves to every kind and condition of high, dry land. Price, 35c per pound, postpaid. See our Special Farm Seed Price List for quantity prices.

### For Low, Moist Land

This mixture contains timothy, Canada blue grass, perennial rye grass, orchard grass, meadow fescue, alsike, and sweet clover, making a most desirable mixture for low lands bordering streams, marshes and sloughs that have been ditched and muck lands bordering lakes and ponds. Price, 35c per pound. See our Special Farm Seed Price List for quantity prices.

Please send me your price list and catalog of field and garden seeds. We got our seeds of you last year and was well pleased.

C. F. HALE,  
Coopersville, Mich.



Alsike Clover.

## Alsike and Timothy Mixtures

No combination affords a better hay than alsike clover and timothy. Cut at the proper time, it cures a beautiful green color, fragrant and sweet, and there is nothing grown as a forage that is so highly relished by all kinds of stock. This combination is highly recommended by agricultural experiment stations and the Department of Agriculture. The alsike forms a thick bottom, increasing the amount of hay as compared with timothy alone, besides affording a much better feed.

Alsike and Timothy are both perennials, both thrive on the same kinds of soil, they mature at the same time, therefore are well adapted for a combination which cannot be too highly recommended.

Michigan farmers have long appreciated this combination, hence have grown it extensively for years, a great many of the crops being threshed for seed. As the two seeds are about the same size, it is impossible to make a clear separation, and as the mixture is not a standard on the market, the seed is bought at a considerably less price than would be the case if they could be separated. For this reason we are able to sell a high grade mixture at two to three dollars a bushel less than the same seed would cost if bought separately. As some growers prefer a larger proportion of alsike than others, we offer different mixtures at different prices, according to the percentage of alsike. By our recleaning process, these mixtures are of uniform character, free from noxious weeds, making them just as desirable to use as though the two were bought separately and mixed.

To secure best results, sow in the spring with a light nurse crop of wheat, oats, or barley. 1 lb., 35c, postpaid. Ask for our Special Farm Seed Price List.





## Sweet Clover

White Blossom (Mellilotus Alba)

### THE GREATEST SOIL BUILDER KNOWN.

Sweet Clover is a biennial, leguminous plant. There are two varieties, the yellow and the white blossom, but the latter is the more valuable.

White Blossom Sweet Clover, *Mellilotus Alba*, sometimes called Bokhara Clover, resembles alfalfa when young. The root system of Sweet Clover is one of the most notable features. During the first season of its growth, the root develops to a large size, striking deep into the soil and becoming quite fleshy, often reaching a diameter of one-half inch at the crown. The fleshy character of the root means the addition of a great amount of vegetable matter to the soil, even when the top is removed as a hay crop.

Sweet Clover was used as a food for animals 2,000 years ago. The most prominent use at present is that of a soil improver. "In this role there is no other plant which so quickly puts waste land or run-down farms back into condition for producing crops," Government Bulletin, 19351. The roots have been estimated at about 20 tons green weight per acre in a good crop of Sweet Clover. The decay of the fleshy roots at the end of the second year, when the plant dies out, opens up the soil and provides a passage for water and air into the subsoil. It is better adapted to short rotation than alfalfa.

Seeded in the spring, either alone or with a nurse crop, it produces its greatest growth the next season, and is ready to turn under for green manure or utilized as a hay crop. As a bee pasture it ranks among the best. It thrives on the poorest or the richest soils.

Cattle, hogs, or chickens pastured on sweet clover make gains which compare very favorably with those made from either alfalfa or red clover, and sweet clover will grow where the others fail to make a stand.

Failure of farmers to make use of this valuable plant has been a fear that it could not be eradicated. This is a mistake, for the biennial nature of the plant renders this problem easy. If cut as hay and not allowed to reseed, it goes out in two years, leaving behind a vast amount of valuable fertilizing material.

Considering the many advantages possessed by Sweet Clover, a more extended use of it in the improvement of worn-out lands, inoculation of soils for alfalfa, and soil improvement, is strongly recommended by the Department of Agriculture.

No other forage or soiling crop has ever come into such rapid favor as White Blossom Sweet Clover. It is however not strange that this is true, for no other plant possesses so many merits. If it had no other property than its ability to inoculate the soil for Alfalfa, it would be a wonderful agency, but in addition to this, it is one of the best forage plants, possessing all the feeding qualities of Alfalfa; will establish itself in a greater variety of soil than any other legume; as a fertilizer it equals or even surpasses red clover, and especially is this true where the soil is lacking in humus, as the large fleshy roots of sweet clover furnish a great amount of this essential element in addition to the nitrogen supplied by red clover. As a soil builder, either for naturally poor soils or those that have been exhausted, no other plant can take its place. It is also one of the best crops for bees, from which they gather a honey that many prefer to white clover. Finally, but not least, the cost of the seed at this time is but little more than half as much as red clover.

### Michigan Grown Sweet Clover

Much of the Sweet Clover seed on the market is from the Southern States, or from irrigated districts in the West, and unsuited for our Northern States. We make a specialty of Michigan grown seed, which is without doubt the best that is produced, purity is better than 99 per cent, germination very high, color bright golden and in every respect the best to be obtained. For those farmers who wish the very choicest seed to be had, we select the best lots, which after careful reselecting is offered under our **Blue Bird Brand**, a mark that stands for the very highest quality obtainable in seeds.

Last season, the unusual demand for Sweet Clover seed exhausted the market of the better grades before planting time and we are looking for an even greater demand this year, owing to the extremely high price of red clover, as well as the more extended demand for Sweet Clover. We would, therefore, advise our friends who want good seed to place their order early.

Inoculate With  
EDWARDS' LEGUME BACTERIA  
See Page 40.



Sweet Clover.

## The Kind of Seed to Buy and How Germination Is Increased

Sweet Clover and Alfalfa Seeds have hard shells, a portion of them so hard moisture cannot penetrate and they do not germinate. For this reason only about 15 PER CENT OF UNHULLED SEED WILL GROW; 85 per cent is worthless. Hulled seed contains 30 to 50 per cent of hard seeds that will not germinate under ordinary conditions. In various tests hard seeds have been planted under ideal conditions for germination for months and years without growing. To overcome this natural condition we have at heavy expense installed a process for treating these seeds that increases the germination of Sweet Clover 50 to 100 per cent and Alfalfa 25 to 50 per cent. The largest grower in Illinois writes: "We sent 100 lbs. for treatment and on testing the seed after it returned, found it germinated 94 per cent. The same seed before treatment germinated less than 50 per cent. Have just sown 25 acres of Sweet Clover and find the seed is coming up very thick, and sowed at the rate of 10 lbs. per acre."

This treatment is for germination only and does not take the place of inoculation, which is for the purpose of fixing nodules on the roots and furnishing nitrogen to promote growth. By our process for increasing germination and the use of Edward's Pure Bacteria, we firmly believe good stands of either Sweet Clover or Alfalfa can be secured on any suitable land and save several times the cost of inoculation by the less amount of seed used.

Sweet Clover requires a thoroughly compact seed bed, with just enough loose soil on top to cover the seeds. It is usually best to seed on ground like corn stubble that does not require plowing, or can be sown with alfalfa in the spring on ground that has been rolled or well settled. Sow 10 pounds of our treated seed, or 15 to 20 pounds of untreated hulled seed, or 20 to 30 pounds of unhulled seed per acre. We do not handle the unhulled seed and do not recommend it.

Price, 1 lb., 55c, postpaid. Ask for our Special Farm Seed Price List.



# Cow Horn Turnip

The value of Cow Horn Turnip is little appreciated and but few farmers yet realize that as a soiling and feeding crop, it is one of the most useful that can be grown. It has however, been tested sufficiently to prove its worth and too much cannot be said in its favor.

We are familiar with a farm that never was any too productive, the land being naturally thin and underlaid with a sort of quick sand subsoil; besides, the farm had been badly run until it was producing but little and regarded undesirable by all who were familiar with it. A new owner decided to begin at the bottom and build it up by the Cow Horn Turnip process and keeping all the stock the farm would maintain. The results have been almost marvelous, as this farm is now producing as good crops as any farm in that section, and better than some of them that a few years ago outranked it. The plan followed was to plant as many acres to Cow Horn Turnip each spring as circumstances would permit, sowing with oats or barley. After the grain was taken off, the turnips would continue to grow till cold weather in the fall, many of them growing six to twelve inches above the ground. Before freezing, as many were pulled as were wanted for feeding and the balance left in the ground to be plowed under the following spring. The Cow Horn Turnip is a splendid root crop for all kinds of stock, and may be fed to dairy cows without tainting the flavor of the milk as other turnips do. They also make a valuable pasture for sheep. After freezing they decay rapidly, leaving openings in the soil, permitting air and water to enter, at the same time leaving in the land a great mass of humus forming vegetable matter. If the land is very thin or badly run, this process may be repeated as many times as deemed advisable, rotating the spring grain nurse crop, until the land is in condition for corn or potatoes; or, by disking over the turnips in the fall, winter rye may be sown and both rye and turnips plowed under late in the spring for potatoes, beans, buckwheat or other late crop. Another plan is to sow winter vetch with rye in the fall, which may be plowed under the following fall, or left for pasture or hay. At this stage of the process, if the soil is acid, a free application of lime stone would probably insure a good stand of Sweet Clover, which is another wonderful soil builder and which prepares the way for Alfalfa or Red Clover.



Cow Horn Turnip.

One of the most essential elements for plant growth is humus, and practically all soil that has been cropped to any extent, is more or less deficient in this element, while in many cases after long cropping, the land is almost devoid of it. One often hears the question asked: Why is it we cannot grow clover and get such crops as we used to? The answer is very simple. When our lands were new, the soil was rich in humus and nitrogen, accumulated from ages of decaying matter and both of these elements are as essential to the growth of clover and other crops as water and light, but by continual cropping the land has been robbed, until there is not sufficient food in it, to sustain such crops as were first produced. Then too, there are thin, sandy soils on which there was never much humus—producing vegetation and these never have been productive; but by proper treatment, any soil that has any fertility at all, can be built up and made profitable. For this purpose, no other crop is so useful at the beginning as Cow Horn Turnips.

Alone, the Cow Horn Turnip will not furnish all the elements that poor soil requires, but by judicious rotation of the nurse crops and combining Vetch or Sweet Clover with the turnip, almost any kind of light soil can be made productive. Sown in orchards, they open up the soil for air and moisture, besides furnishing the humus that is so often lacking.

Even when the soil is not thin, but fairly productive, Cow Horn Turnip will be found valuable in helping to establish vetch or clover, by supplying the element that all legumes require, but which so many farms are deficient in.

We strongly recommend this crop to the attention of all farmers, as we believe practically every farm has some part of it that will be benefited by the application of some of the suggestions we have offered.

**Price, \$1.10 per pound, postpaid. See our Special Farm Seed Price List for quantity prices.**





## Natural Grasses

### Canadian Blue Grass

Canadian Blue Grass is a hardy perennial usually growing six to eight inches high; is dark blue in color and resembles Kentucky Blue Grass, to which it is related. Canada Blue Grass appears commonly in the Northern States, bordering on Lake Erie, and in New England. Under most conditions, there is no doubt the Canada Blue Grass is decidedly inferior to Kentucky Blue Grass, though by no means worthless. As a pasture it possesses considerable value and in some sections is considered more valuable for this purpose than Kentucky Blue Grass. In the South it has been found to stand the heat better than the former, and for this reason is valuable for lawns, especially as it stands close clipping. We do not recommend it for hay. It has been imported from Canada extensively and sold for Kentucky Blue Grass, a practice that should be condemned. 1 lb., 40c, postpaid. Ask for our Special Farm Seed Price List.

### Kentucky Blue Grass

Kentucky Blue Grass is the most important cultivated pasture grass in the United States, is palatable, nutritious, productive, and can be grown over a large region. Kentucky Blue Grass is a hardy perennial with an abundance of base leaves of dark green color and of a low-growing habit. It forms a thick, tenacious sod, making it especially useful in lawn mixtures and for pasture. For pastures it may be sown in the fall or spring, and is usually combined with timothy and red clover or alsyke. It is also used extensively in combination with orchard grass, meadow fescue, and other grasses. For a permanent pasture a mixture of seven pounds Kentucky Blue Grass, three pounds alsyke, three pounds meadow fescue, and three pounds orchard grass makes a most desirable combination. For lawns, a mixture in the proportion of sixteen pounds Kentucky Blue Grass, three pounds red top and one pound white clover will produce good results in almost any kind of soil. Seed should be sown at the rate of 50 to 75 pounds per acre. The legal weight of Blue Grass is 14 pounds to the bushel, but we obtained our supplies direct from the famous Kentucky Blue Grass region, taking pains to secure the very highest grades, and the stock we offer weighs 21 to 22 pounds per bushel. 1 lb., 50c, postpaid. Ask for Special Farm Seed Price List.

### Meadow Fescue or English Blue Grass

A hardy perennial grass. Does not propagate by root stalks or form a very heavy sod, neither is it as bunchy as orchard grass. Valuable as a meadow grass, furnishing early and late feed. This grass has not received the attention it deserves. 1 lb., 50c, postpaid. Ask for our Special Farm Seed Price List.

### Orchard Grass

Considered a hay grass, but does not possess as high feeding value as timothy. Its chief value is for pasture, and combined with other grasses and clover is valuable for this purpose. It is sometimes recommended for lawns, but should not be used for this purpose, as it grows in bunches producing a large, coarse leaf. It furnishes an abundance of early and late pasture, standing close cropping. 1 lb., 50c, postpaid. Ask for our Special Farm Seed Price List.

### Perennial Rye Grass

Sometimes called English Rye Grass. A perennial, succeeding best on damp clay soils. Better adapted to short rotations than some of the other grasses, and is valuable in permanent pasture mixtures. 1 lb., 30c, postpaid. Ask for our Special Farm Seed Price List.

### Italian Rye Grass (LOLIUM ITALICUM)

This is, like the Perennial Rye Grass, valuable for pasture and also for hay. It thrives on rich, moist land, where from three to four cuttings may be made in a season. It grows very quickly and will stand close pasturing. About 24 pounds of seed required to the acre.

### Red Top (Red Seed) (AGROSTIS VULGARIS)

The place for Red Top is on rather moist soil, deficient in lime and fertility. It will grow where the soil is too poor for Timothy and Kentucky Blue Grass. It is a good variety to sow with Timothy and Clover for meadow or pasture and is more permanent than either of the other two. It should be fed close, as if it is allowed to grow up to seed, the cattle dislike it. On good soil it grows about two feet high; on poor, gravelly land about half that height. It has been grown successfully even on alkali land where other grasses failed. Red Top is commonly known as Herd's Grass and should be more extensively grown, especially in combination with other grasses.

Red Top has interlacing thick roots which make a firm sward not likely to suffer injury from hoofs of animals. It stands the effect of drought better than Timothy. It is more permanent if it is grazed off and not allowed to go to seed. For the best quality of hay, it should be cut when in full flower. It is more easily cured than almost any other grass.



Kentucky Blue Grass Pasture.

As a hay crop, Red Top is next to Timothy in importance among grasses in this country. It grows two feet or more high and yields one to two tons per acre. It increases in thickness for several years after sowing and is one of the most permanent of cultivated grasses. Red Top weighs 14 pounds to the bushel. Only ten pounds of "Blue Bird" Brand required to the acre. 1 lb., 40c, postpaid. See Farm Seed Price List for quantity prices.

### Bromus Inermis (AWNLESS BROME GRASS)

This is a native of the Russian Steppes and thus is suited to a cold climate and dry soil. It is good for pasture, and in some places for meadow—where the conditions are favorable. Brome Grass makes a dense growth of leaves which start down close to the ground. Sheep and cattle like it the best of any grass.

Brome Grass thickens up rapidly by underground roots or stems. A thin stand thus improves quickly. It forms a dense sod six to eight inches thick, thus binding the soil together and preventing it from being wind blown. It is one of the deepest rooted of cultivated grasses. The stems grow erect, attaining a height of four feet or more.

It is drought defying, frost resisting. Yields enormous crops of splendid hay. It adapts itself to almost every condition of soil and climate and to any use to which grass may be put, equaling in quality and rivaling in yield almost any other grass. The roots push through the soil and form fresh plants on every side. It starts from two to three weeks earlier in the spring than native prairie grass and it keeps green in the autumn longer than any of the useful grasses grown in the West. No amount of cold seems to be able to kill it.

**Culture.** It does best on rich soil and lasts longer when Clover or Alfalfa is sown with it. The Clover or Alfalfa will then keep supplying nitrogen to the soil and thus help to nourish the Brome Grass, which would otherwise soon exhaust the soil's nitrogen. If sown with a nurse crop that crop should be sown thinly. 20 pounds of good Bromus Inermis an acre are sufficient. It grows slowly for a time, hence the farmer should not be hasty in concluding that he has failed to get a stand of the grass. 1 lb., 40c. See Farm Seed Price List for quantity prices.

### Timothy

The most valuable of all the hay grasses grown in America, and to some extent adapted for pastures. A frequent mistake is made in keeping the timothy meadow down too long. In most locations it does not pay to maintain a timothy meadow more than two or three years. Timothy is frequently sown with clover, but matures later than the Medium or June. The best of all combinations is timothy and alsyke clover. We make a specialty of timothy, handling large quantities, and offer several grades. As the market fluctuates frequently, we prefer quoting prices on application, but assure our customers high quality and low prices.

**BLUE BIRD.** Only the very fanciest grades to be obtained are good enough for this brand. The seed must be bright, free from all weather damage, high germination and purity of 99.75%. It represents the cream of the crop. 1 lb., 30c, postpaid. See Special Price List. **BOB WHITE BRAND.** For this brand we use only choice selections of western seed showing good color, high germination, and purity of 99.5 per cent and take great pains to maintain a uniform quality. 1 lb., 25c, postpaid. Ask for our Special Farm Seed Price List.



Field of Soy Beans.

## Sunflower

The Sunflower is beginning to attract considerable attention as an ensilage crop. Several methods of culture have been employed, some farmers planting in the hills with corn, others planting 2 or 3 rows of corn and 1 row of sunflower; while others prefer planting each separate, but cutting both at same time when ready to fill the silo. The Sunflower is a high protein plant, furnishing in ensilage, this important element in which green corn is deficient.

If allowed to mature, the Sunflower furnishes a great quantity of seeds, which are one of the most valuable poultry feeds when fed with grain. They are rich in oil and said to be especially good for hens during the moulting period. We believe Sunflowers will be grown much more extensively in the future, both as forage and seed crops, and that a trial will prove their value for both these purposes. Price, 30c per lb., postpaid. See our Special Farm Seed Price List for quantity prices.

## Sudan Grass

Sudan Grass is an annual of the Sorghum type. It was introduced into this country by Mr. C. V. Piper of the U. S. Department of Agriculture in 1909. The success of this new crop was at once remarkable, and by 1913, demand for seed was so great that it sold for \$2.00 per pound.

Unlike other Sorghums, it is very fine stemmed and leafy; stems about the size of a lead pencil and grow to a height of 5 to 7 feet. It is essentially a dry weather crop, the past season being too wet for its success; but in ordinary seasons it is sure to prove a most valuable addition to our forage crops. Can be cut twice or allowed to seed and then cut. Cures a beautiful green color, making a hay or forage of great value on account of the large amount of saccharine matter and protein, thus especially valuable for dairy cattle. Said by Government authorities to be the best ensilage crop known, and by many growers to make a more valuable forage than alfalfa.

There is no doubt but that the time is near when Sudan Grass will be grown extensively in all the Northern States, but its introduction has been retarded through lack of acclimated seed; the only source up till now, having been that of the Southwestern States. This year, for the first, we are able to offer northern grown seed and so far as we know, ours is the only stock of this kind offered.

We predict a remarkable increase of acreage to this crop the coming season.

Plant when the ground is warm, about when corn is planted, in rows 18 to 30 inches apart, and cultivate as corn. Unless the season is very dry, two or three cultivations are sufficient. May be cut when 3 to 4 feet high, when a second crop will come on. Is best adapted to light, dry soils. Use four to ten pounds of seed to the acre, according to how close it is drilled. Will send a special bulletin on request.

Prices, pkt., 10c; 1 lb., 30c, postpaid. Ask for our Special Farm Seed Price List.

## Soy Beans

Sometimes called Soja Beans. Is an erect rather hairy legume, coming into general use. It is a very valuable crop in many ways. For hay it possesses even greater value than either alfalfa or clover; is an excellent green manure, and makes a splendid ensilage with corn. Is also a very profitable crop grown for seed as the supply is never equal to the demand. As a soil improver, it is one of the most useful crops. The Soy Bean may be used as a green pasture, which is in its prime during the late summer or early fall, when other pastures are short. For pasture it has been found more satisfactory to mix early and late varieties in equal proportions and plant thickly, by this means a more extended season is obtained. If Soy Beans are inoculated, they draw nitrogen from the air, same as clover, and are thus one of the most valuable fertilizing crops. The crop is rapidly gaining favor. Do not plant till ground is warm. For hay use 1 or 2 bushels of seed per acre. For pasture about 3 pecks each early and late varieties. For a seed crop, 15 pounds of small seed, 30 to 40 pounds of large seed. Sow with drill and cover about two inches. For silage, drill 5 to 10 pounds per acre in corn at last cultivation. Special bulletin on Soy Beans furnished on request.

**MEDIUM BROWN.** A medium early, large seeded variety of vigorous growth and especially adapted for hay and ensilage. Planted with corn, it makes a good growth and adds protein to the feed in which the corn is lacking. Early maturing varieties are not as suitable for ensilage as the late. Pkt., 10c; lb., 25c, postpaid. See our Special Farm Seed Price List.

**BLACK BEAUTY.** A small seeded, early variety, very satisfactory in silage or mixed with later varieties for pasture or hay. Our seed is Michigan grown. Price, postpaid: Pkt., 10c; lb., 25c. Ask for prices on larger lots.

**MAMMOTH YELLOW.** A late variety, large yellow seed, large vigorous plant. Desirable for either hay or pasture, though not likely to mature in Michigan except in very favorable seasons. The best to plant with corn for ensilage. Pkt., 10c; lb., 25c, postpaid. See Special Farm Seed Price List.

**HOLLYBROOK.** Small yellow seed, matures in Michigan, plant vigorous, well podded and one of the best late varieties. Our seed is Northern grown. Price, postpaid: Pkt., 10c; lb., 25c. See our Special Farm Seed Price List.

*I was well pleased with the seeds I got of you last year and wish to use them again, so please send me your Special Farm Seed Price List and oblige.—WM. T. MESSING, Ruth, Mich.*

### ONCE A CUSTOMER, ALWAYS A CUSTOMER.

It is our aim to furnish the best seeds that can be obtained. We make a conscientious effort to have them fresh, and in case of field seeds, to see they are well cleaned. We expect every trial order will make a permanent customer.



Sudan Grass.

## Field Beans

The handling of commercial beans represents a very important part of our business. Michigan is the greatest bean-growing state in the Union, and produces the best in the world. We handle hundreds of carloads of hand-picked Pea, Red Kidney, White Kidney, and Yellow Eye. In addition to furnishing the finest seed stock, we are also prepared to supply cooking beans at prices much lower than if bought second or third hand. Many of our customers make up club orders with seeds, taking advantage of the bushel prices and saving on freight. Prices subject to market change.

**PEA BEANS.** Sometimes called Navy Beans. Are more extensively grown than any other variety. Our seed stock is the choicest selection of the genuine White Wonder variety, the most prolific and handsomest bean ever grown. Price, pkt., 10c; lb., 20c. Ask for our Special Farm Seed Price List.

**LARGE WHITE MARROW.** An old and well known variety. Large, spreading vine, with short runners. Seed white, large oval. Matures about the same time as the Kidney Bean. Cooks dry and mealy, being preferred by many to any other variety. Price, pkt., 10c; lb., 30c. Ask for our Special Farm Seed Price List.

**RED KIDNEY.** This variety is coming into more general use, being in great demand by canners. A large, handsome, kidney-shaped bean of light red color. Requires a strong, heavy soil; matures about ten days later than the Pea Bean. Price, pkt., 10c; lb., 25c. Ask for our Special Farm Seed Price List.

**WHITE KIDNEY.** One of the best cooking beans grown. It affords a most delicious dish when properly baked. Requires about the same soil conditions suitable for Pea Beans, but are a week to ten days later. Price, pkt., 10c; lb., 30c. Ask for our Special Farm Seed Price List.

**YELLOW EYE.** This is one of the most prolific beans. The seed is similar in shape and size to the White Marrow, but has a large yellow blotch around the eye. A splendid cooking bean, both for baking and boiling; cooks dry and mealy. Pkt., 10c; lb., 20c. Ask for our Special Farm Seed Price List.

## Cow Peas

The Cow Pea is a valuable crop in many ways. It is one of the strongest growing legumes and when well inoculated draws heavily upon the nitrogen of the air, therefore is a good soil renovator. It can be cut for hay and makes a most excellent forage, is valuable for pasture, and one of the best soiling crops. As a green manure it is one of the most valuable for increasing the supply of humus and nitrogen in the soil. The crop is deserving more attention than it has received. For seed production they should be sown in drills, 30 to 36 inches apart, using 30 pounds of seed to the acre. For hay or soiling, sow broadcast, 60 lbs. of seed per acre, when soil is warm.

Cow Peas do best in a warm, dry season and should never be planted till the ground is warm. Farmers who have learned to handle the crop consider it one of the most profitable and it is fast gaining in cultivation. It puts protein in ensilage, makes a valuable, succulent hay, and is one of the best natural fertilizers.

**BLACK EYE.** A medium late variety; vines erect and vigorous. In many sections regarded as one of the most satisfactory. Price, pkt., 10c; lb., 25c; 5 lbs., \$1.00, prepaid. Ask for special bushel prices.

**WHIPPOORWILL.** One of the best general purpose varieties. Vines erect, vigorous, and yields well in hay and seed. Price, pkt., 10c; lb., 25c; 5 lbs., \$1.00, prepaid. Ask for special bushel price.

**SPECIAL MIXTURE.** This mixture is intended to be adapted to all kinds of soil and is preferable to any single variety for hay, silo or green manure. It contains Whippoorwill, Clay, and New Era, the varieties most suitable for the purpose. Prices, pkt., 10c; lb., 20c; 5 lbs., 90c, prepaid. Ask for special bushel price.

## Rape

**DWARF ESSEX.** A succulent, nutritious forage plant, adapted to almost all sections of the country. No other crop will afford as heavy yields or give better returns for the money than this. Excellent for swine or sheep, and as it stands quite severe cold, affords good pasture late in the season when other crops are gone. The Dwarf Essex variety is the only one that is worthy of a trial. Ground should be prepared as for turnips. Sow in June or July. If sown with drills, 2½ pounds; or broadcast, 4 pounds of seed should be used per acre. Price, postpaid: pkt., 5c; lb., 25c. Ask for our Special Farm Seed Price List.



Cow Peas Growing in Corn.

## Field Peas

Field Peas are one of the most valuable legume crops and succeed well on almost any kind of soil, though do best on a clay loam. As a forage crop one of the most useful especially for dairy cows and pigs. Ready for use six weeks after sowing and no crop can be grown that will afford more useful feed at a season of the year when other feeds are scarce. For young pigs or hogs nothing is more valuable. Peas require deep planting to obtain best results; they may be sown broadcast and plowed lightly under, or if sown on plowed land should be well harrowed. The common practice is to sow peas and oats together. In this case the peas should be sown first as above and the oats afterward, using 1 to 1½ bushels of each to the acre.

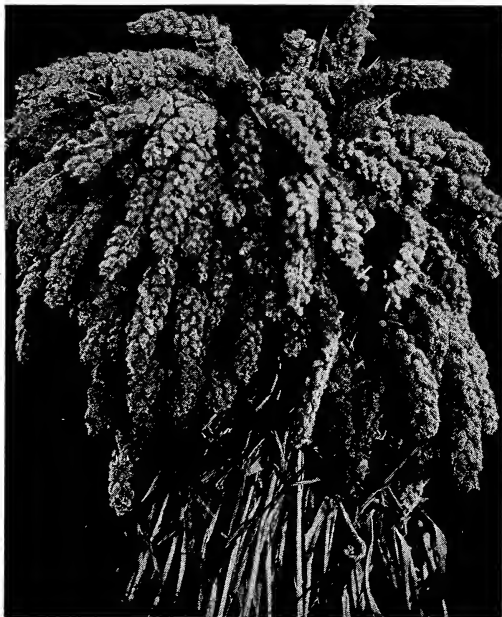
**CANADIAN FIELD PEAS.** Undoubtedly the best of all Field Peas. The stock we offer is of the best quality and being near the source of production we are able to secure choice selection. Our Blue Bird Grade is saved from the very choicest lots and represents the cream of the crop. We have other grades and will be glad to furnish samples and prices on application. Pkt., 10c; lb., 20c; 5 lbs., 90c, prepaid. See Special Farm Seed Price List for quantity prices.

## Vetch

**WINTER, or HAIRY VETCH.** For drought resistance this is the best of all the Vetches. Hardy, and thrives on sandy soil too poor for clover. It is a legume and gathers nitrogen from the air, making it one of the most useful soiling crops for poor or worn out lands. It stands severe cold, making it a useful cover and green manure crop. Has a tendency to volunteer, hence should be cut or plowed under before seeds mature, if desiring to follow it with a grain crop. The manure value of this crop is estimated at \$26 per acre, as compared with commercial fertilizers. May be sown in the fall for spring pasture or hay, using 40 to 60 pounds of seed if sown alone, but a more common practice is to sow 15 to 25 pounds of vetch and a half bushel of winter rye or wheat, any time from August to October, when it may be pastured the following spring or cut for hay when in bloom. In the Northern States it may be sown in April or early May, either alone as above, for fall pasture, or 15 to 20 pounds of vetch with ¾ to 1 bu. of oats, to be plowed under after the oats are harvested. Sown with oats in the spring it furnishes an abundance of nitrogen, increasing the yield of oats and affording one of the best fertilizers for a fall crop.

Winter Vetch should be inoculated to insure good results. This may be done by using Edward's Legume Bacteria at a very small cost. See page 40.

Price, postpaid: Pkt., 10c; lb., 45c. Ask for our Special Farm Seed Price List.



Golden Millet.

## Siberian Millet

A fine variety from Russia, earlier than either German Millet or Hungarian, and consequently very valuable for the North and yields remarkably. It is extremely hardy, withstanding drought wonderfully and is about two weeks earlier than the Golden Millet. The leaves are very tender, making it excellent for hay. The South Dakota Experiment Station pronounces it "the most promising variety yet tested." The plant stools to a remarkable degree, as many as thirty to forty stalks have been grown from one seed, and is not subject to rust. 1 lb., 20c, postpaid. For prices see our Special Farm Seed Price List.

## Japanese Millet

Improperly called "Billion Dollar Grass." Entirely distinct from all other Millets. It grows from 6 to 9 feet high, stands up remarkably and yields enormous crops. When cured it makes good hay and in quality is superior to corn fodder. It is relished by all kinds of stock. It may be sown broadcast at the rate of 15 lbs. an acre, but it is better to sow in drills 12 to 18 inches apart, using 10 to 12 lbs. to the acre. Cultivate until the plant is 18 inches high, when its rapid growth will smother all weeds. It does best on low, moist ground. 1 lb., 25c, postpaid. For prices see our Special Farm Seed Price List.

## Hog or Broom Corn Millet

This is grown for the same purpose for which other Millets are sown, but makes inferior hay unless cut very young. It, however, yields enormously of seed, even 60 to 70 bushels to the acre, and this seed is very advantageously used for fattening swine and other stock, and is of special value for this purpose in sections where corn cannot be safely or cheaply grown. Seed also makes very fine feed for poultry and young chicks. It is very similar to the Early Fortune Millet, except that the seed is yellowish-white in color. It will mature in about two months from sowing the seed. 1 lb., 20c, postpaid. For prices see our Special Farm Seed Price List.

*I want to tell you that two years ago, we used your seeds and never used any better ones.—MRS. CORA J. ROWLACHER, Shepherd, Mich.*

All who use Blue Bird Seeds are glad to recommend them to others.

# Millet

The varieties of Millet are among the oldest of cultivated grains. A large part of the world's inhabitants subsist upon the different Millets, especially in Africa, Turkey, Persia, India and Japan. However in our country we are chiefly interested in the use of Millet as a stock food.

Millets are especially adapted to regions of light rainfall and hot weather. They are used principally for forage, being very valuable where Timothy is an uncertain crop. The hay is fed most satisfactorily to dairy cows and sheep. In feeding value it ranks well above Timothy.

**Culture.** Millet does best on rich soils, full of humus, or vegetable matter, where the seed bed is fine and well prepared. It is not suitable for stiff clay or cloddy soils, which would cost too much to prepare for this crop. When sown in hot weather Millet is especially good to subdue weeds.

It is also used as a catch-crop after early grain or a crop which fails. In any case it should never be sown until continued warm weather is certain. None of the small seed varieties should be sown deeper than three-quarters of an inch if the ground is moist. The seed may be sown broadcast or with a narrow tread drill. Sow about 35 lbs. of seed per acre for hay and slightly less than that for seed. Moist clay soil requires more seed than light sandy soils since the seed does not germinate so well. The best seed is produced from Millet sown thinly in drills and cultivated between the rows. Millet should never be sown until the earth is warm in the spring and when continued warm weather is assured.

## Golden Millet

(True Southern Grown Seed). In the North, Millet is sown almost altogether for hay, and for that purpose Southern grown seed is much the best. It grows taller than does that from Northern seed, and that means more hay. It is finer than that from Northern seed, and that means better hay. In fact, it is our judgment, based on an experience of many years, that a farmer had better, from the stand-point of profit alone, pay \$3.50 a bushel for true Southern grown Golden Millet than to sow the best Northern Millet as a gift. Millet seed produced in the North, even from Southern seed, becomes what we call Common Millet. Not only does the plant change in character becoming coarser and much more dwarf, but the seed itself shows a change, and is readily distinguished by those experienced in handling it.

We wish to say that any Millet seed offered and shipped by us as Golden Millet is true Southern Grown Seed, and that only.

Golden Millet is very sweet, palatable, and when fed to dairy cows produces a large amount of milk. On good rich soil it grows four to five feet high. It is very tender if cut at the right stage, which is when it is in full bloom. About three-fourths of a bushel of seed is sown to the acre. A good yield is from three to five tons of hay to the acre. 1 lb., 20c, postpaid. See our Special Farm Seed Price List for quantity prices.

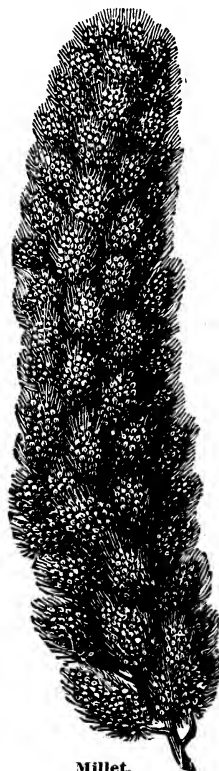
## Hungarian Millet

(Dark Seed). Often called Hungarian Grass. Many regard this as being better even than Golden Millet as it is about one week earlier and requires less moisture. The hay is fine and of excellent feeding value.

It is especially valuable on account of requiring such a short season to make a fine crop of most excellent hay. For this reason it is much used as a catch crop. It can be sown as late as the 4th of July with good results, in ordinary seasons. It is much used for following such crops as early potatoes and barley for a crop of hay, thus giving two crops on the same land in one year. Also grown as a green manuring crop to turn under, adding humus and fertility for future crops. Hungarian Millet does not grow as coarse as some. 1 lb., 20c, postpaid. Ask for our Special Farm Seed Price List.

## Common Millet

This is the best known and most widely grown of the millets; fine stemmed and leafy, with a compact head. Seeds light yellow. Matures somewhat earlier than Hungarian and produces a heavy crop of splendid foliage. Sow and cultivate like Hungarian. 1 lb., 20c, postpaid. Ask for our Special Farm Seed Price List.



Millet.



## Barley

In the development of Barley, the State of Wisconsin stands foremost, and to Prof. Moore of the University of Wisconsin is due the credit for having brought to bear all the science of botany and agriculture in the prosecution of this important work.

The Pedigree Barley, for which he is largely responsible, and which is being grown very extensively in that state under the supervision of State Inspectors, is said to have added not less than \$10,000,000 to the value of the Barley crop in that state the past five years, yet by no means all the Barley grown there is Pedigree, though farmers are beginning to appreciate its value and no doubt in a few years no other kind will be sown. The yield has been increased 15 to 20 bushels per acre, the grain is of higher quality and the straw is stiffer than that of the old kinds.

We have no hesitation in claiming to have this season a stock of seed Barley that is unsurpassed, having made a special effort in this direction. The different varieties we offer are bright, plump, heavy grain, as free from oats or other grain as it is possible to have it.

### Michigan Winter Barley

#### The Most Valuable Grain Introduced in Recent Years

Winter Barley is grown extensively in the South, but until 1909, no strain had been found suitable for the more northern states. In the fall of 1909, Mr. Dreer, of the Agricultural Department, obtained some seed that he thought desirable for Michigan which he sent to Prof. Spragg, of the Michigan Agricultural College, who planted it that fall, and by a process of selection of the most desirable plants and the elimination of those not deemed suitable, he succeeded in developing a strain that has shown the most remarkable results in this state.

Sow same time as winter wheat or rye at the rate of 1½ to 2 bushels per acre. Price, lb., 15c, postpaid. See our Special Farm Seed Price List.

### Oderbrucker Barley

This well known barley developed by Prof. Moore of Wisconsin, is one of the best that is grown. He says: "For stiffness of straw, rust resistance and color is superior to any other sort." In the Northwest, where barley is one of the chief crops, Oderbrucker is more extensively grown than any other variety; largely because of its heavy yielding quality, besides being one of the heaviest grains, making it especially useful for malting purposes and particularly valuable for feeding, it being claimed that it contains 15% more protein than common barley. It is one of the 6-row varieties. Sow 100 lbs. per acre. For Prices, see Our Special Farm Seed List.



Speltz or Emmer.

### Wisconsin Pedigree Barley No. 5

This stock was grown by one of the most successful growers in Wisconsin, especially for seed purposes, and we feel warranted in offering the seed for the highest grade that is obtainable. It is a most vigorous grower, with tall, strong straw, which stands up better than any other. Every barley grower should hasten to get a start with this new and coming variety. Professor Moore, of Wisconsin, the noted barley expert, says: "The Pedigree is a much heavier yielder, much more uniform in kernel, and a great advance in point of color over any existing sort." H. F. Krueger, of Wisconsin, says: "It has the stiffest straw, plumpest berry, stands up best and yields more per acre, than any barley I have ever seen." It was originated from the Oderbrucker, 6-row type, but has proven a heavier yielder than the original Oderbrucker and is lighter color; in this respect it is the handsomest barley of which we have any knowledge. Sow 100 lbs. per acre. For Price, see Our Special Farm Seed Price List.

### Michigan Bearded Barley

A well-known variety of the six-row type and grown very extensively throughout the state. Our stock has been very carefully selected and cleaned, the grain is heavy and of high germination. 1 lb., 15c, postpaid. See Special Farm Seed Price List.



Champion Beardless Barley.

### Champion Beardless Barley

Is as easily grown as oats, wheat, or other small grain. Our seed is of an improved type and as free from bearded as it can be obtained. This variety is especially recommended for its feeding value and for heavy yields. It is the earliest of all barleys, grows a strong, stiff straw and may be sown as early as oats. 1 lb., 15c, postpaid. See our Special Farm Seed Price List.

### White Hulless Barley

No barley of which we have knowledge has proved so valuable to the stock raiser as the Improved White Hulless. It is not a malting variety, but for feeding purposes there is no barley raised which can compare with it in earliness, yield and quality. It has many very valuable properties. While it has sufficient hull to hold it in the head, these hulls are really separated in threshing. The absence of beards makes it safe to feed to all kinds of stock. Its earliness is a characteristic which is especially desirable. It will mature in from 60 to 90 days, according to soil and locality.

The grain is exceedingly heavy, weighing from 60 to 63 pounds to the measured bushel. The yield varies according to soil and climatic conditions, but it can be depended upon to produce from 35 to 80 bushels an acre. Its nutritive value is very great.

It is often grown for hay, coming very early and providing rich feed. It should be cut just before it becomes ripe, while the straw is green.

For grain sow 1½ bushels to the acre; for hay, 2 bushels. 1 lb., 20c; 5 lbs., 90c, postpaid. See our Special Farm Seed Price List for quantities prices.

## Speltz or Emmer

Speltz is a grain resembling barley. It was introduced into this country from Southern Europe, where it has been used in place of wheat for flour, also as a stock feed for centuries. It appears to be adapted to all kinds of soil and climate; is more productive than oats; cut at the right time makes an excellent hay; is resistant to cold and drought; neither rusts, blights nor lodges. In fact is a most useful and profitable crop to grow. The grain is splendid feed for hogs, cattle, horses, and poultry; is rich in protein, making it superior to oats in feeding value, and when growing makes a wonderfully valuable pasture. Sow 1½ to 2 bushels per acre. 1 lb., 15c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.



# Field Corn

## Michigan Grown, Scientifically Cured, Graded, and Stored

Corn is the great staple crop in all parts of the country, and grows under widely varying conditions of soil and climate. More experimental work has been carried on with corn at the agricultural experiment stations than with any other farm crop, and all important cultural facts have been definitely worked out.

Owing to climatic changes in our seasons, the seed corn question is becoming more and more a difficult problem requiring serious consideration. It has been shown the past few years, that old-time methods of handling corn intended for seed are unreliable for best results. That merely storing in a varying temperature, even though warm part of the time, is not sufficient, but that to preserve good germination, **it must be dried on the cob quickly, yet at a moderate temperature.**

This is best done by a system of air currents with the temperature maintained at an even degree, but to accomplish it, scientific and expensive facilities are necessary. In order to insure our customers best possible quality of Michigan seed corn, we have installed the past season, a modern plant for curing ear corn; then, when in proper condition, it is shelled and graded by most approved methods. The equipment and process is more expensive than that of others who shell first, then dry, but the results are much more satisfactory and as nature intended. Much corn, that if properly handled would make good seed, is spoiled by remaining too long on the wet cob, or frequently by being frozen in this condition. If shelled when the kernel is moist and soft, it is also likely to be injured. Our system of curing is intended to overcome these dangers and to insure the corn being preserved with its full germinating powers.

We use only hand-picked ears that are carefully selected.

**EUROPEAN CORN BORER.** The European Corn Borer has already infested districts in several counties of New York State, Pennsylvania and other Eastern States and is apparently spreading over a wide extent of territory. This pest was introduced into this country in seed and feeding corn and threatens the corn crop of the country unless some effective means is found for combating it.

Every farmer should use seed only from those parts of the country where this dangerous pest has not made its appearance. Michigan is entirely free from it, hence no danger from seed corn grown in this state, but would caution farmers against using seed grown east of Ohio.

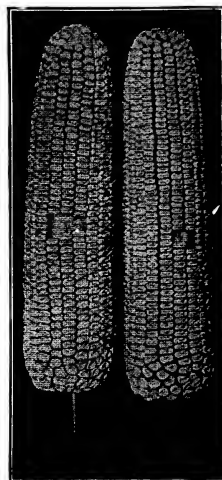
**EARLY YELLOW HYBRID.** A yellow dent corn of Michigan origin and one of the most prolific dent corns ever grown in the state. Ears 7 to 10 inches long with 14 to 16 rows. Like all hybrids, the kernels are not of uniform type, but vary in size and color. Stalks of good height. For a general purpose corn, both husking and as an early ensilage, it is unsurpassed. In average seasons it will mature as early as Early Michigan Dent, but in cool, wet seasons it is not quite as early, though likely to surpass it in yield. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**EARLY WHITE HYBRID.** A white dent corn of Michigan origin, which for yielding and early maturing qualities is without a rival. Stalks 7 to 8 feet high, one to three ears to the stalk; ears 8 to 11 inches long and 18 to 20 rows on a slender cob. This corn matures full as early as Early Michigan, and if there is a better yielding early dent corn we have never seen it. It is especially adapted to wet, cool seasons. We have taken great care in selecting our seed stock, and can recommend this variety for all

Northern territory where dent corn is grown. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**NOTE.**—It is claimed that hybrid corn is more successful on light soils and in "off" seasons than the more highly bred types.

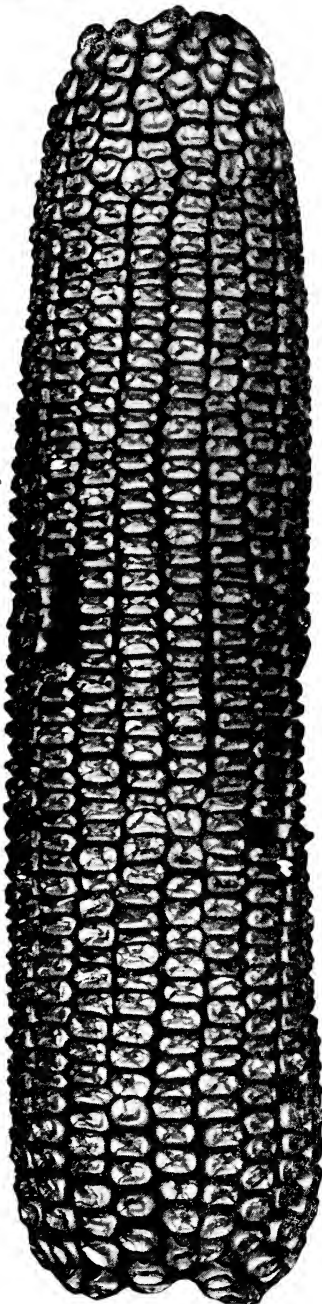
**EARLY MICHIGAN DENT.** A yellow dent corn of great merit for Michigan and similar northern latitudes, and when grown farther south produces a larger ear than in the North. The origin of this corn is not known, but it is one of the earliest of the dent varieties. Ears seven to eight inches long, 14 to 16 rows, kernels medium deep, color a rich yellow. Stalks medium height. This is one of the surest croppers, a splendid yielder and is certain to mature before frost with anything like normal seasonal conditions and reasonable cultivation. We do not think there is a dent corn that will mature farther North than this. Our seed has been most carefully selected. **Large pkt., 10c; 5 lbs., 65c, postpaid. See our Special Farm Seed Price List.**



Silver King.



White Cap Yellow Dent.



Pride of the North.

OUR SEED STOCK OF THE FOLLOWING VARIETIES WAS GROWN IN IOWA, WISCONSIN OR MINNESOTA.

**PRIDE OF THE NORTH.** One of the earliest dent corns grown, maturing as far north as St. Paul. In Iowa, Wisconsin, Michigan, and New York, it is a 90-day corn. Ears medium size, with 16 to 18 rows and 7 to 8 inches long. Color of grain deep yellow, kernels very deep and small red cob. Growth vigorous, stalk medium size, usually producing two ears. This is a very hardy variety and is said to stand cold weather and to be as well adapted to poor soil as the Flint varieties. It is claimed for this corn that it can be safely replanted in South Dakota as late as the last of June. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**WHITE CAP YELLOW DENT.** An old and well tried early variety, maturing under favorable conditions in 90 to 100 days. Of vigorous growth, it produces an abundance of fodder and affords a good yield of medium size ears, 8 to 10 inches long, with 16 to 18 rows. Kernels deep, small red cob. In the ear the grain is almost white, but when shelled is an amber yellow. It is claimed for this variety that it is one of the best in heat and drought resisting qualities. **Large pkt., 10c; 5**

**lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**WISCONSIN NO. 7, or SILVER KING.** This very valuable white dent corn was originated by the Wisconsin Agricultural College, and from there has been introduced to all parts of the Northwest, having been grown successfully in the most extreme northern part of the corn growing sections. Stalks of medium growth, ears uniform in shape and size, maturing perfectly in 90 days. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**GOLDEN GLOW.** One of the best yellow dent corns ever produced. Originated in Wisconsin and it is said that it is the corn that put the state in the corn belt. Ears  $7\frac{1}{2}$  to  $8\frac{1}{2}$  inches long, with from 16 to 20 rows. The diameter of ears is greater than either of above varieties. Kernel is medium yellow to deep orange in color. Matures in 90 to 100 days. This variety has made some phenomenal yields and is held in very high esteem by those who have been growing it. **Pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

## Flint Varieties

**LONGFELLOW YELLOW.** A beautiful 8-rowed yellow flint, ears 10 to 15 inches long. Very prolific and early. One of the most desirable of the flint varieties. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**SANFORD'S WHITE.** An old variety too well known to need description. One of the earliest maturing corns grown. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**SMUT NOSE FLINT.** This variety is very similar to Longfellow, except that the kernels have a reddish tinge. Very early

and one of the most prolific of the flint varieties. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**KING PHILIP.** An extra early variety of flint corn that originated in New England. Ears 10 to 12 inches long, kernels red at the base running to an orange-red at the top. Kernels are softer than other flint varieties, and for this reason regarded a better feeding sort. Will mature anywhere that corn can be grown. **Pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

## Fodder Varieties

**EARLY MASTODON.** In all the qualities required of a fodder or ensilage corn, Early Mastodon is by far the best; stalks 10 to 12 feet high, very leafy and said to be even richer in saccharine matter than Leamling. Matures in 100 to 110 days, and frequently produces 125 bu. per acre. Corn cut in the dough stage is at its best for ensilage, and this variety may be depended upon. As most of the stalks bear 2 and even 3 ears the tonnage per acre is almost equal to St. Charles Red Cob, while the feeding value is greatly superior. Our back cover illustrates a field of this corn, which we recommend for Michigan and all Northern States. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**IMPROVED LEAMING.** Very valuable yellow dent corn, maturing in 100 days, but owing to its vigorous growth has been used more extensively as a fodder or ensilage corn than any other yellow variety. Is well adapted to light soils and produces a remarkable amount of fodder. **Pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**EVERGREEN SWEET CORN.** This affords one of the best early summer green fodders for swine, milch cows and cattle. Is rich in sugar, succulent and relished by all kinds of stock. No other crop will furnish any more feed per acre than sweet corn. Plant the same time as field corn. **Large pkt., 10c; 3 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

**ST. CHARLES RED COB.** Of most vigorous growth, with long, wide leaves and tall, succulent stalk. It is especially adapted to ensilage purposes. Under favorable conditions it will mature as far north as the extreme southern part of Michigan and will reach sufficient maturity for ensilage wherever dent corn is grown. **Large pkt., 10c; 5 lbs., 65c, postpaid. Ask for our Special Farm Seed Price List.**

Early Yellow Hybrid.

## Pop Corn

We are extensive handlers of Pop Corn, and besides offering seed we are in a position to furnish a superior quality for popping at very low prices. Will quote on request.

**WHITE RICE.** The variety that is most extensively used for commercial purposes. Ears 6 to 7 inches long; kernels white and shape of rice. Pops large and tender. A very profitable crop to grow in a small way. **Price, large pkt., 10c; 1 lb., 20c; 5 lbs., for an acre, 90c, postpaid. Ask for our Special Farm Seed Price List.**

**QUEEN'S GOLDEN.** A favorite variety for the garden and home use; also very popular with street men. Stalks 6 feet high, hardy, matures about the same time as White Rice, and very prolific. **Large pkt., 10c; 1 lb., 25c; 5 lbs. for an acre, \$1.10, postpaid. Ask for Special Farm Seed List.**

**LITTLE GIANT.** Sometimes called Australian Hulless, Dwarf Rice, etc. Ears small, but a number of them on a stalk; one of the most productive varieties grown and in popping qualities excels all others. The demand for this corn is growing constantly and it commands the highest price. **Large pkt., 10c; 1 lb., 25c; 4 lbs., for an acre, 90c, postpaid. Ask for our Special Farm Seed Price List.**



Little Giant Pop Corn.

## Oats

There are many things to be considered with reference to the oats crop for the next few years. Uncertainty regarding the maturity of corn is making that crop less dependable, though it is to be hoped climatic conditions may be more favorable the coming season, but in view of the disastrous results past two or three years, oats promise the surest returns of all the coarse grain crops and not excepting wheat, it is doubtful if any grain crop is as certain to prove profitable as oats.

For feeding, next to corn, oats is the most useful of all the grain crops. It would, therefore, seem that farmers should plan for as extensive an acreage as possible with assurance that no matter how large the crop may be, it will all be wanted.

We have exercised the greatest care in selecting and cleaning all of our seed stock, which we believe is equal to any that can be obtained and better than much of the stock that is being offered for seed purposes.

We shall be pleased to submit samples and feel sure you will agree with all claims we make.

Aside from getting a better variety than you have been growing, it pays to change seed, the difference between what new seed costs and what you can sell common grain for, is so slight that it represents but a few cents per acre. **Prices subject to market changes.**

### College Wonder Oats

This new variety originated at the Michigan Experimental Station, promises to out-rank even the wonderful Worthy Oat that has proven so successful. We have the record of one field in Michigan, that in 1918, yielded 108 bushels per acre, while yields of 75 bushels and upward were common.

This oat resembles the Worthy in size of berry, but the awn is shorter and not as feathery as that of the Worthy, making the grain less bulky, but heavier and of unusual feeding value; as a market oat it has few equals.

The seed we are offering is pedigree stock and we have never seen a handsomer sample; berry large and plump, bright color and very heavy. From statements of farmers who have grown College Wonder Oats, we are satisfied that this variety is destined to become one of the most popular oats ever grown in the Northern States and recommend it for all sections north of the Ohio River. Ask for sample and for Prices. See our Special Farm Seed Price List.

### Worthy Oats

Before you decide the seed out question, you should give the Worthy serious consideration, and especially the pedigree seed we are offering. Ask us for a sample and price on the quantity you require. This is the year for oats; they will be wanted. A very slight increase in yield will pay for the seed several times over. Oats being sold by weight, has it ever occurred how much difference it makes, whether your grain weighs 36 lbs. to the bushel, or perhaps only 28 lbs.

This is a development of the Michigan Agricultural College and has proven in a six year test, the most prolific oat grown in Michigan. The straw is of medium growth, heads large and spreading, berry large, plump and heavy. In 1917, this oat out-yielded all other varieties, many pieces going as high as 85 bushels per acre. The average yield through a six-year comparative test at the Michigan Experiment Station, has been 60 bushels. Farmers who have been growing Worthy, are all enthusiastic ever it and pronounce it the best oat they have ever grown.

Our seed stock is from pedigree seed and of extra quality, having been selected from only the best crops. Ask for our Special Farm Seed Price List.

### Banner Oats

This is one of the earliest maturing oats and said to be as nearly rust proof as any variety grown. Straw stiff, standing up well. Grain heavy and good color. Our seed is from a most reliable source, has been carefully re-cleaned and is free from any kind of weed seeds. We recommend this variety for all sections of the Northern States. Ask for Special Farm Seed Price List.



Field of Banner Oats after cutting.

### Improved Silver Mine

This oat has a reputation as a heavy and exceedingly reliable producer. It is hardy and very prolific, yielding a beautiful white kernel which is especially desirable for the manufacture of rolled oats, and grain for this purpose will be in great demand the coming year, owing to the increased use of oat meal.

Heads are large and borne on a stiff, bright straw which is less liable to lodge than many other varieties. Berry is long, plump, heavy and bright, making it a very attractive grain for market purposes and for feeding, no better oat is grown. In fact, this is deservedly one of the most popular and widely cultivated oats yet produced, and is, without doubt, adapted to as wide a range of soil and climatic conditions as any oat in cultivation. Ask for our Special Farm Seed Price List.

## Buckwheat

Should be sown about the middle of June, at the rate of from one-half to three-fourths bushel per acre. You will avoid the danger of it spoiling by threshing as soon as dry.

**JAPANESE.** This is the most productive variety, it frequently giving enormous yields. The berry is larger than the Silverhull, produces a fine flour and is a week earlier than other varieties. **Lb., 15c, postpaid. Ask for our Special Farm Seed Price List.**

**SILVERHULL.** For quality of flour no Buckwheat excels the Silverhull. The berry is not quite as large as the Japanese, is a silver-gray color, shell very thin and grain heavy. The plant remains in bloom longer than any other variety, therefore is valuable for bees. **Price, 1 lb., 15c, postpaid. Ask for our Special Farm Seed Price List.**

## Flax

Every farmer should grow a small field of flax at a good profit. The ground seed is valuable for many purposes and every farmer buys more or less. Any surplus seeds always find a ready market at a good price.

Sow as early in the spring as possible after there is no danger of frost. Cut before quite ripe, if possible, in clear weather, to avoid rains; let it lay in the swath a few hours, when it should be secured from the weather.

If wanted for seed, sow  $\frac{1}{2}$  bushel per acre, if for the fibre, a larger amount of seed should be used. **Price, pkt., 5c; lb., 20c, postpaid. See our Special Farm Seed Price List.**

## Broom Corn

**IMPROVED EVERGREEN.** In all respects the best variety grown. Is early, produces a superior quality of brush of straight, fine texture and green color. **Prices, pkt., 5c; lb., 20c, postpaid. See our Special Farm Seed Price List.**

## Rosen Rye

This wonderful Rye is certain to supplant all other varieties in time, being the heavier yielder and furnishing a better quality of grain than any other rye grown in this country. To Prof. Spragg of the Michigan Agricultural College is due the credit for developing this most remarkable grain, which we believe is destined to add many thousands of dollars yearly to farm crops in Michigan.

It produces a strong, vigorous straw and the grain is large, plump and heavy. The berry is 50 per cent larger than the common rye, color light, with a silvery luster, making it very attractive.

Our seed stock is grown by some of the best farmers in Oakland County, apart from other rye, and threshed in a most careful manner. It stools very heavy, therefore requires less seed. Sow 3 to 4 pecks up to September 10th. After that date, 4 to 5 pecks per acre. **Price, large pkt., 10c; lb., 20c, postpaid. Not postpaid, pk., 50c; bu., \$1.85. Bags extra. Ask for our Special Farm Seed Price List.**



Rosen Rye.

**COMMON WINTER.** Michigan grown winter rye is regarded as the most desirable for seed. We furnish many carloads to seedsmen in different parts of the country, it being especially popular with farmers who grow it for forage, pasture, and as a grain crop.

Winter Rye, either Rosen or Common affords excellent pasture for pigs, calves and other young stock. For this purpose sow early in the fall and in the spring sow 4 or 5 pounds Dwarf Essex Rape per acre on the rye, which may be covered with a spike tooth drag without injury to the rye. Try a Rye and Rape pasture. **1 lb., 20c, postpaid. See Farm Seed Price List.**

### Spring Rye

**True Stock.** Spring Rye makes an excellent crop where winter grain has been killed out, or for sowing where a fall crop has not been planted. If desired it can be turned under and made to answer a good purpose in adding to the fertility of the soil. Sow seed same time as other grain. Does not grow quite so large straw as Winter Rye, but usually yields well and grain is of fine quality.

We wish to emphasize the fact that we sell the **genuine Spring Rye, sown in the spring and harvested the same season.** We now offer an extra fine grade. To insure receiving enough for your requirements we advise placing your order early, as we have only a limited quantity. Sow about 1½ bu. per acre. **1 lb., 25c, postpaid. See our Special Farm Seed Price List for quantity prices.**

## Kaffir Corn

A dwarf, leafy variety of sorghum, which is grown for both seed and forage. Should be planted and cultivated same as corn. When harvested for both seed and fodder

should be cut in the late dough stage. 5 to 8 lbs. of seed per acre. **Prices, postpaid: Large pkt., 10c; lb., 20c. Ask for our Special Farm Seed Price List.**

## Sorghum or Sugar Cane

**EARLY AMBER CANE.** The earliest of all and the richest in saccharine matter, making it the best for syrup, producing 150 to 250 gallons of rich, fine flavored syrup or 4 to 5 tons of forage. There is a growing demand for sorghum syrup at profitable prices, making this a desirable crop to grow. **Prices, postpaid: Large pkt., 10c; lb., 25c. Ask for Special Farm Seed Price List.**

**SUGAR CANE FODDER.** One of the most useful forage crops. Can be grown anywhere, in wet or dry seasons. Can be fed to all kinds of stock. When about 2½ feet high it may be cut and a second crop will come on. Sow with grain drill with every other hole stopped, cultivate same as corn. **Prices, postpaid: Pkt., 10c; lb., 20c. For larger quantities see our Special List.**

## Red Rock Winter Wheat

Red Rock is a variety of red wheat having exceptional winter hardiness, high yielding ability, an extra stiff straw, and those characteristics that produce a bread of unusual quality.

When wheat breeding work began ten years ago, the white wheats were outyielding the reds, while the slightly higher price paid for the red wheat did not make up the difference, but since the discovery of Red Rock, white varieties cannot compete from the standpoint of yield, quality, or price.

**History.**—Red Rock wheat originated from an individual kernel planted in the fall of 1908. In 1911 it had been increased enough to enter the variety series of the Michigan Agricultural College. The severe winter of 1911-1912 proved its superiority.

Our Red Rock seed is of pure strain, grown with great care, fields rogued and pains taken in threshing to keep it free from other grain. The demand for this seed will be greater than can be supplied this season and expect the limited supply will be quickly absorbed. Average seed-

ing, 1½ bushels per acre up to Sept. 20. Later seedling, 7 to 8 pecks per acre. **Price, 20c per lb., postpaid. For larger quantities see our Special List.**



A Development of Prof. F. A. Spragg, Plant Breeder, Michigan Agricultural College.

## Spring Wheat

**MARQUIS.** Of Canadian origin and is grown more extensively in the Northwest than any other variety. Straw medium length, heads 4 inches long and beardless. Matures very early. Berry short and round, red color. Since the introduction of this wheat, several of the Northern and Mid-West states have been growing it with great success. Yields as high as 40 bushels per acre were reported in Michigan the past season. As a nurse crop, wheat is the best of all spring grains. See inside of back cover. **Price, lb., 20c, postpaid. Ask for our Special Farm Seed Price List.**

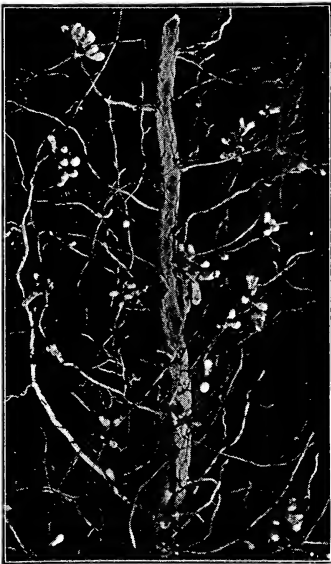
About 16c  
Per Acre

## EDWARDS' LEGUME BACTERIA

About 16c  
Per Acre

### Why Better Crops Are Grown by Their Use

The chief value of legumes such as alfalfa, clover, peas, beans, etc., for use either as food or as green manure, lies in their high content of nitrogen. With the aid of certain kinds of bacteria, the legumes can get their supply of nitrogen from the air. These bacteria live and grow in the soil, and as the new plants start to grow the bacteria burrow into the roots, grow there, and produce nodules or tubercles, visible to the eye as little bunches on the smaller roots. During this process the bacteria take the nitrogen from the air and give it to the plants. Unless the plants have these legume bacteria growing on their roots, they will not make a successful growth.



Portion of root of alfalfa plant showing the tubercles or nodules formed by the nitrogen-gathering legume bacteria. (Photograph natural size.)

On land where it is hard to get a good catch of legumes, or on which a new crop is to be sown, the right kind of bacteria must be supplied by inoculation. One method that has been recommended in times past is to spread over the field to be

seeded, soil from a field that has grown the same crop. This method is cumbersome and expensive, and is apt to introduce into the soil seed of bad weeds, or fungous or bacterial plant diseases, hence it is not a desirable method.

### Seed Inoculation Simple

The best method of inoculation is to treat the seed before it is sown with a pure culture of the right kind of bacteria for that particular crop. By this method the inoculation can be done in a few minutes time, and the bacteria are carried into the soil with the seed in ample numbers to insure inoculation of the roots with consequent increased growth of the crop, and with no risk of introducing seeds of bad weeds or germs of plant or animal diseases.

### The Cost

EDWARDS' LEGUME BACTERIA cultures are made in two sizes, to inoculate 30 and 60 pounds of seed. To inoculate 30 pounds of seed, 65c; to inoculate 60 pounds of seed, \$1.25, postpaid.

These prices mean a very low cost per acre, the exact amount depending on the amount of seed sown. The cost is less than to pay freight rates on soil from a distance, or even to haul it from a neighbor's field for soil inoculation, and the labor is much less, as seed for several acres can be inoculated in a few minutes with the pure cultures.

Cultures are made for legume crops as follows: Alfalfa, Sweet Clover, Burr Clover, Red Clover, Alsike Clover, Crimson Clover, White Dutch Clover, Japan Clover (Lespedeza). Field or Garden Beans, Lima Beans, Broad Beans, Velvet Beans, Soja Beans, Field or Garden Peas, Sweet Peas, Vetches, Cow Peas, Peanuts, Sanfoin, Beggar Weed. Of this list, the same culture can be used for either Alfalfa or Sweet Clover, and likewise the same culture can be used for Red, Alsike, Crimson, and Dutch Clovers. All the other crops require a different culture for each as named.

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Field of Marquis Spring Wheat.

Tests at Experimental Stations have established the fact that in territory south of Minnesota, fresh seed Marquis Spring Wheat from the Northwest, should be planted every year. The crop is more certain, yield larger and quality better. Our seed weighs 62 lbs. per bushel and is a remarkably fine quality.

### Blue Bird Brand Alfalfa





An Ideal Ensilage Corn should produce a large stalk, with an abundance of leaves. It should be prolific in ears and ears should be good size. It should

mature in at least 110 days and the stalk when ready to cut, should contain a maximum of saccharine matter.

## Early Mastodon

meets all these requirements and more, for under favorable conditions it will mature in Michigan in 95 to 100 days and stands pre-eminently, the Best of All Ensilage Corn.

DePUY'S SEEDS ARE FIRST AID TO GOOD CROPS

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# THE C. E. DEPUY COMPANY

## SEEDSMEN

PONTIAC

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MICHIGAN